

|                    |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|
| <b>Schülercode</b> |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|

## Bestimmung des Brechungsindexgradienten und des Diffusionskoeffizienten einer Salzlösung mittels Brechung von Laserlicht (10 Pkt.)

### A. Messung des Gradienten des Brechungsindex von Salzlösungen in Wasser (4,5 Pkt.)

| Frage            | Antwort                                                                                                                                                             | Punkte                                     |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| A.1<br>(1,2 pt.) | Lege das für die gebrochene Laserlinie verwendete Blatt Millimeterpapier bei. Achte darauf, deinen Schülercode und die Konzentration der Lösung darauf zu notieren. | Deflectogram of<br>$C_0 = 23$<br>g/150 mL  |
| A.1              | Lege das für die gebrochene Laserlinie verwendete Blatt Millimeterpapier bei. Achte darauf, deinen Schülercode und die Konzentration der Lösung darauf zu notieren. | Deflectogram of<br>$C_0 = 28$<br>gr/150 mL |
| A.1              | Lege das für die gebrochene Laserlinie verwendete Blatt Millimeterpapier bei. Achte darauf, deinen Schülercode und die                                              | Deflectogram of                            |

Konzentration der Lösung darauf zu notieren.

$C_0 = 33 \text{ g/150 mL}$

A2.

(1,5 pt.)

| $i$ | $\delta_i \text{ (cm)}$ | $\xi_i \text{ (cm)}$ | $Z_0 \text{ (cm)}$ | $d \text{ (cm)}$ | $Z \text{ (cm)}$ |
|-----|-------------------------|----------------------|--------------------|------------------|------------------|
| 1   |                         |                      |                    |                  |                  |
| 2   |                         |                      |                    |                  |                  |
| 3   |                         |                      |                    |                  |                  |
| 4   |                         |                      |                    |                  |                  |
| 5   |                         |                      |                    |                  |                  |
| 6   |                         |                      |                    |                  |                  |
| 7   |                         |                      |                    |                  |                  |
| 8   |                         |                      |                    |                  |                  |
| 9   |                         |                      |                    |                  |                  |
| 10  |                         |                      |                    |                  |                  |
| 11  |                         |                      |                    |                  |                  |
| 12  |                         |                      |                    |                  |                  |
| 13  |                         |                      |                    |                  |                  |
| 14  |                         |                      |                    |                  |                  |
| 15  |                         |                      |                    |                  |                  |
| 16  |                         |                      |                    |                  |                  |
| 17  |                         |                      |                    |                  |                  |
| 18  |                         |                      |                    |                  |                  |
| 19  |                         |                      |                    |                  |                  |
| 20  |                         |                      |                    |                  |                  |

Table 1 of

$C_0 = 23 \text{ g/150 mL}$

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------|----------|----------|--|-----|-----------------|--------------|------------|----------|----------|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|----|--|--|--|--|--|-----------------------------------------------|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|----|--|--|--|--|--|-----------------------------------------------|
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| A.2 | <table><tr><td><math>i</math></td><td><math>\delta_i</math> (cm)</td><td><math>\xi_i</math> (cm)</td><td><math>Z_0</math> (cm)</td><td><math>d</math> (cm)</td><td><math>Z</math> (cm)</td></tr><tr><td>1</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>12</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>13</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>14</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>16</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>17</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>18</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>19</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>20</td><td></td><td></td><td></td><td></td><td></td></tr></table> |              |            |          |          |  | $i$ | $\delta_i$ (cm) | $\xi_i$ (cm) | $Z_0$ (cm) | $d$ (cm) | $Z$ (cm) | 1 |  |  |  |  |  | 2 |  |  |  |  |  | 3 |  |  |  |  |  | 4 |  |  |  |  |  | 5 |  |  |  |  |  | 6 |  |  |  |  |  | 7 |  |  |  |  |  | 8 |  |  |  |  |  | 9 |  |  |  |  |  | 10 |  |  |  |  |  | 11                                            |  |  |  |  |  | 12 |  |  |  |  |  | 13 |  |  |  |  |  | 14 |  |  |  |  |  | 15 |  |  |  |  |  | 16 |  |  |  |  |  | 17 |  |  |  |  |  | 18 |  |  |  |  |  | 19 |  |  |  |  |  | 20 |  |  |  |  |  | Table 1 of<br><br>$C_0 = 28 \text{ g/150 mL}$ |
| $i$ | $\delta_i$ (cm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | $\xi_i$ (cm) | $Z_0$ (cm) | $d$ (cm) | $Z$ (cm) |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 3   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 5   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 6   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 7   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 8   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 9   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 10  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 11  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 12  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 13  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 14  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 15  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 16  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 17  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 18  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 19  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 20  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| A.2 | <table><tr><td><math>i</math></td><td><math>\delta_i</math> (cm)</td><td><math>\xi_i</math> (cm)</td><td><math>Z_0</math> (cm)</td><td><math>d</math> (cm)</td><td><math>Z</math> (cm)</td></tr><tr><td>1</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |            |          |          |  | $i$ | $\delta_i$ (cm) | $\xi_i$ (cm) | $Z_0$ (cm) | $d$ (cm) | $Z$ (cm) | 1 |  |  |  |  |  | 2 |  |  |  |  |  | 3 |  |  |  |  |  | 4 |  |  |  |  |  | 5 |  |  |  |  |  | 6 |  |  |  |  |  | 7 |  |  |  |  |  | 8 |  |  |  |  |  | 9 |  |  |  |  |  | 10 |  |  |  |  |  | Table 1 of<br><br>$C_0 = 33 \text{ g/150 mL}$ |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| $i$ | $\delta_i$ (cm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | $\xi_i$ (cm) | $Z_0$ (cm) | $d$ (cm) | $Z$ (cm) |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 3   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 5   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 6   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 7   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 8   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 9   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |
| 10  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |            |          |          |  |     |                 |              |            |          |          |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |  |  |    |  |  |  |  |  |                                               |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |    |  |  |  |  |  |                                               |

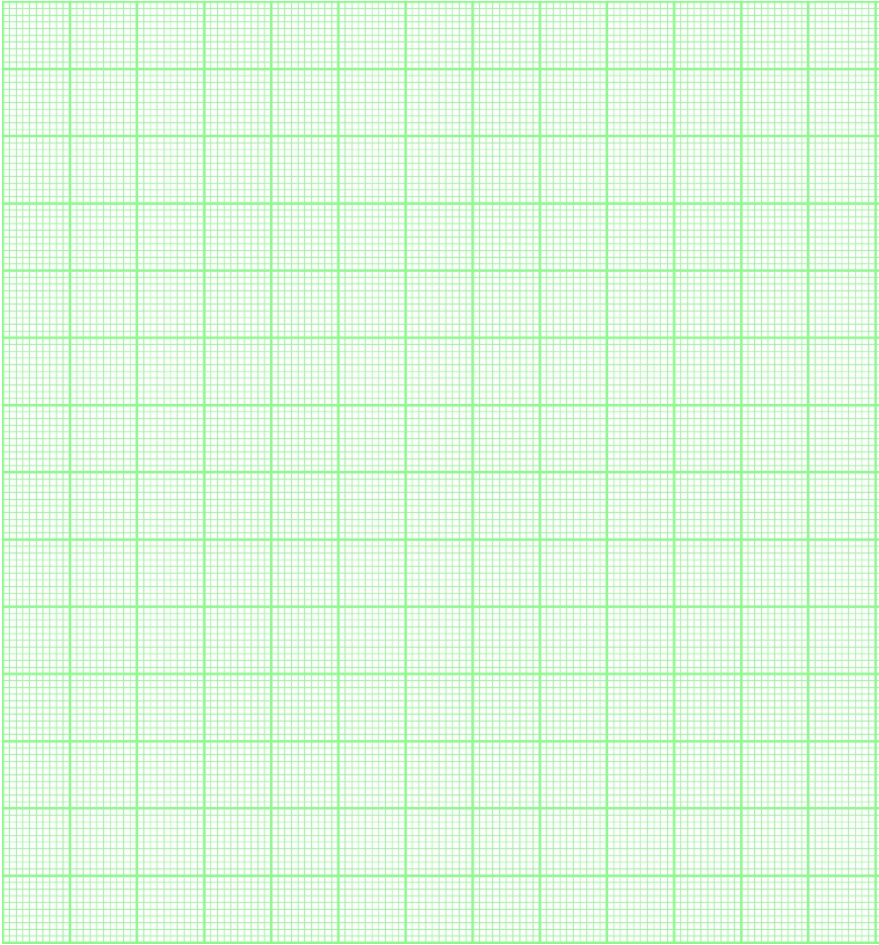
|    |  |  |  |  |  |
|----|--|--|--|--|--|
| 11 |  |  |  |  |  |
| 12 |  |  |  |  |  |
| 13 |  |  |  |  |  |
| 14 |  |  |  |  |  |
| 15 |  |  |  |  |  |
| 16 |  |  |  |  |  |
| 17 |  |  |  |  |  |
| 18 |  |  |  |  |  |
| 19 |  |  |  |  |  |
| 20 |  |  |  |  |  |

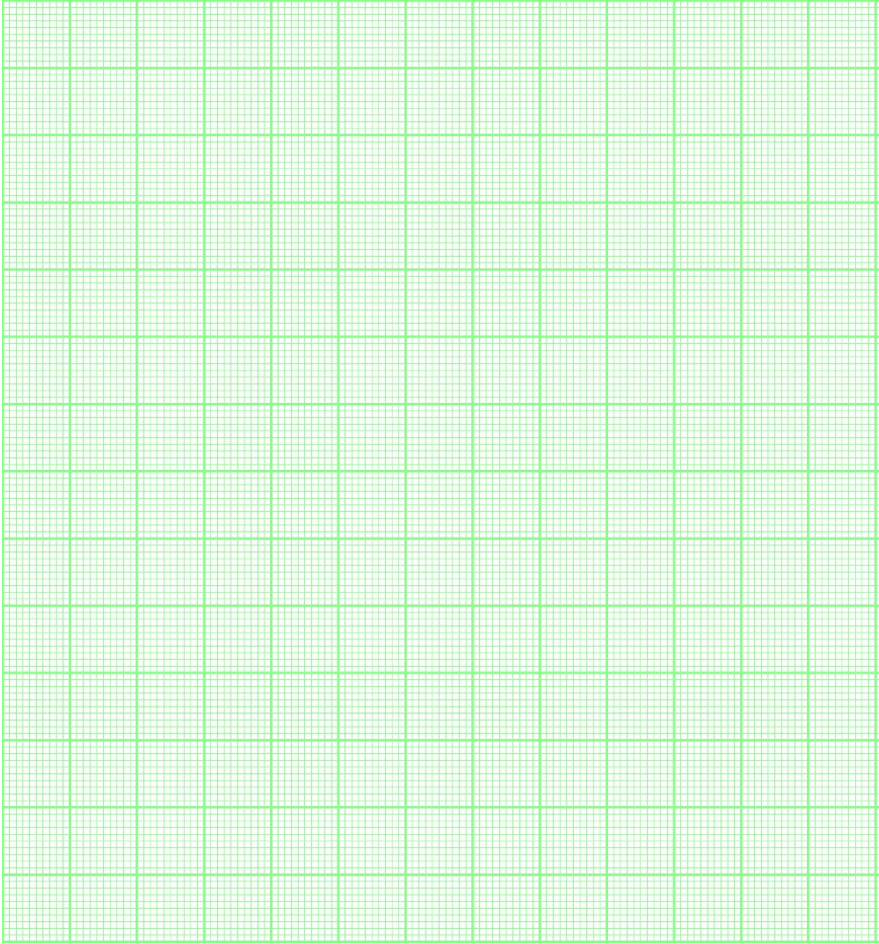
A.3  
(1,5 pt.)

| $i$ | $Y_i$ (cm) | $dn/dY$ |
|-----|------------|---------|
| 1   |            |         |
| 2   |            |         |
| 3   |            |         |
| 4   |            |         |
| 5   |            |         |
| 6   |            |         |
| 7   |            |         |
| 8   |            |         |
| 9   |            |         |
| 10  |            |         |
| 11  |            |         |
| 12  |            |         |
| 13  |            |         |
| 14  |            |         |
| 15  |            |         |
| 16  |            |         |
| 17  |            |         |
| 18  |            |         |
| 19  |            |         |
| 20  |            |         |

Table 2 of

$C_0 = 23 \text{ g/150 mL}$

| A.3 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>Plot</p> <p><math>\frac{dn}{dY}</math> vs <math>Y</math></p> <p><math>C_0 = 23 \text{ g/150 mL}</math></p> |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------|---------|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|----|--|--|----|--|--|----|--|--|--|--|--|-----------------------------------------------------------------|
| A.3 | <table><tr><th><math>i</math></th><th><math>Y_i \text{ (cm)}</math></th><th><math>dn/dY</math></th></tr><tr><td>1</td><td></td><td></td></tr><tr><td>2</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td></tr><tr><td>4</td><td></td><td></td></tr><tr><td>5</td><td></td><td></td></tr><tr><td>6</td><td></td><td></td></tr><tr><td>7</td><td></td><td></td></tr><tr><td>8</td><td></td><td></td></tr><tr><td>9</td><td></td><td></td></tr><tr><td>10</td><td></td><td></td></tr><tr><td>11</td><td></td><td></td></tr><tr><td>12</td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table> | $i$                                                                                                           | $Y_i \text{ (cm)}$ | $dn/dY$ | 1 |  |  | 2 |  |  | 3 |  |  | 4 |  |  | 5 |  |  | 6 |  |  | 7 |  |  | 8 |  |  | 9 |  |  | 10 |  |  | 11 |  |  | 12 |  |  |  |  |  | <p>Table 2 of</p> <p><math>C_0 = 28 \text{ g/150 mL}</math></p> |
| $i$ | $Y_i \text{ (cm)}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | $dn/dY$                                                                                                       |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 3   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 5   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 6   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 7   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 8   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 9   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 10  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 11  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
| 12  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                               |                    |         |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |  |  |  |                                                                 |

|     |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|--|
|     | <table border="1"><tr><td>13</td><td></td><td></td></tr><tr><td>14</td><td></td><td></td></tr><tr><td>15</td><td></td><td></td></tr><tr><td>16</td><td></td><td></td></tr><tr><td>17</td><td></td><td></td></tr><tr><td>18</td><td></td><td></td></tr><tr><td>19</td><td></td><td></td></tr><tr><td>20</td><td></td><td></td></tr></table> | 13                                                                                                            |  |  | 14 |  |  | 15 |  |  | 16 |  |  | 17 |  |  | 18 |  |  | 19 |  |  | 20 |  |  |  |
| 13  |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
| 14  |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
| 15  |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
| 16  |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
| 17  |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
| 18  |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
| 19  |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
| 20  |                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |
| A.3 |                                                                                                                                                                                                                                                         | <p>Plot</p> <p><math>\frac{dn}{dY}</math> vs <math>Y</math></p> <p><math>C_0 = 28 \text{ g/150 mL}</math></p> |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |  |

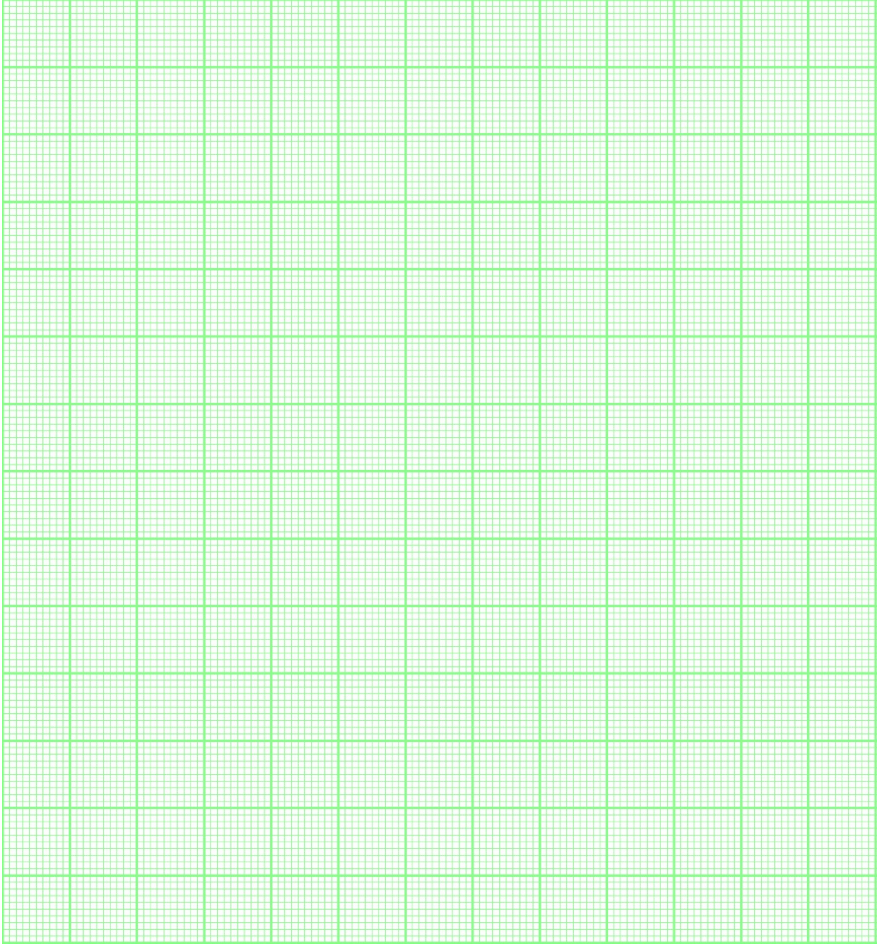
A.3

| $i$ | $Y_i$ (cm) | $dn/dY$ |
|-----|------------|---------|
| 1   |            |         |
| 2   |            |         |
| 3   |            |         |
| 4   |            |         |
| 5   |            |         |
| 6   |            |         |
| 7   |            |         |
| 8   |            |         |
| 9   |            |         |
| 10  |            |         |
| 11  |            |         |
| 12  |            |         |
| 13  |            |         |
| 14  |            |         |
| 15  |            |         |
| 16  |            |         |
| 17  |            |         |
| 18  |            |         |
| 19  |            |         |
| 20  |            |         |

Table 2 of

 $C_0 = 33$  g/150  
mL

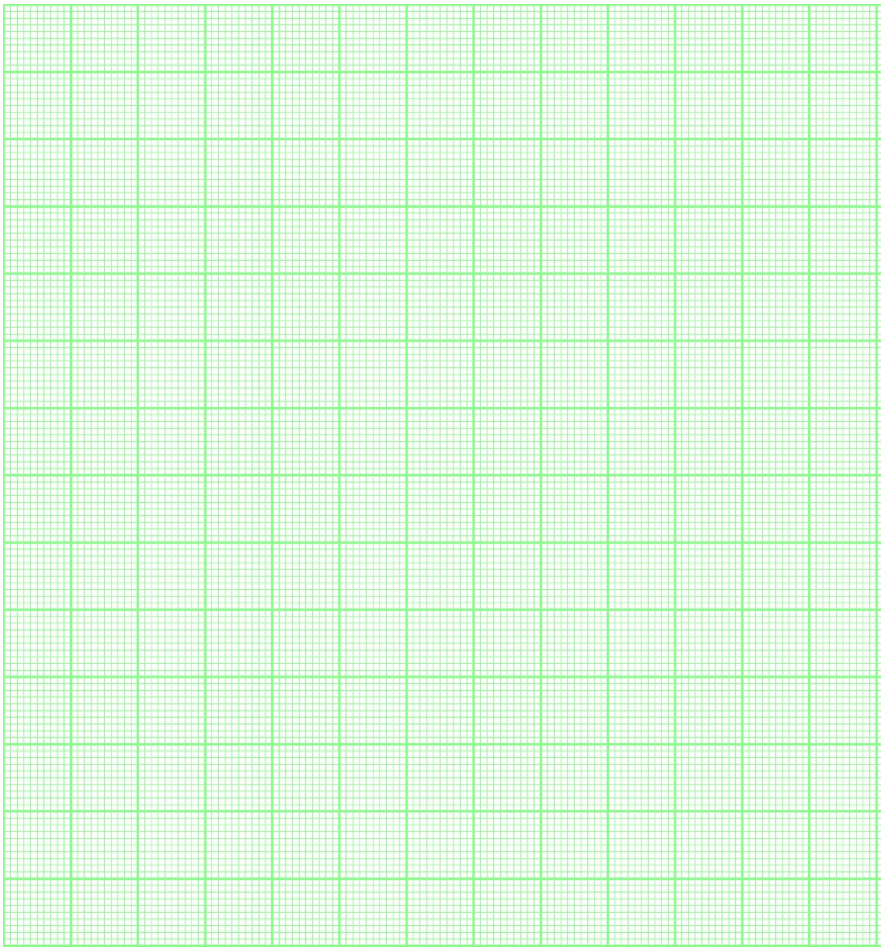


|                             |                                                                                                                                                                   |                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| A.3                         |                                                                                | <p>Plot</p> <p><math>\frac{dn}{dY}</math> vs <math>Y</math></p> <p><math>C_0 = 33 \text{ g/150 mL}</math></p> |
| <p>A.4</p> <p>(0,3 pt.)</p> | <p><math>h</math> für 23 g/150 mL =            cm</p> <p><math>h</math> für 28 g/150 mL =            cm</p> <p><math>h</math> für 33 g/150 mL =            cm</p> |                                                                                                               |



## B: Bestimmung des Diffusionskoeffizienten (4,2 PUNKTE)

| Frage            | Antwort                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Punkte                                    |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|-----------------------------------|
| B.1<br>(0,9 pt.) | Lineare Form von Gl. (3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| B.2<br>(1,8 pt.) | <table border="1"> <thead> <tr> <th><math>i</math></th><th></th><th></th></tr> </thead> <tbody> <tr><td>1</td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td></tr> <tr><td>13</td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td></tr> <tr><td>16</td><td></td><td></td></tr> <tr><td>17</td><td></td><td></td></tr> <tr><td>18</td><td></td><td></td></tr> <tr><td>19</td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td></tr> </tbody> </table> | $i$                                       |  |  | 1 |  |  | 2 |  |  | 3 |  |  | 4 |  |  | 5 |  |  | 6 |  |  | 7 |  |  | 8 |  |  | 9 |  |  | 10 |  |  | 11 |  |  | 12 |  |  | 13 |  |  | 14 |  |  | 15 |  |  | 16 |  |  | 17 |  |  | 18 |  |  | 19 |  |  | 20 |  |  | Table 3 of $C_0$<br>= 23 g/150 mL |
| $i$              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 1                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 2                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 3                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 4                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 5                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 6                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 7                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 8                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 9                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 10               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 11               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 12               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 13               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 14               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 15               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 16               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 17               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 18               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 19               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 20               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| B.2              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Plot of<br>Table 3<br>$C_0$ = 23 g/150 mL |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |



$m$  (Steigung im Graphen) =

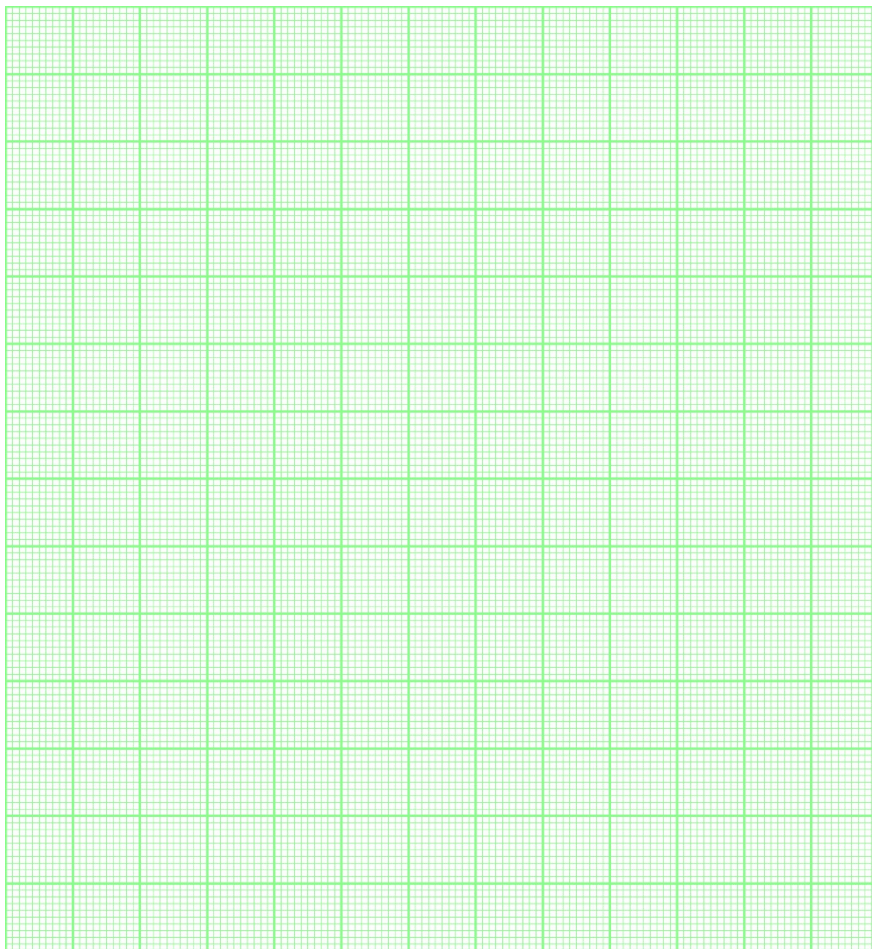
B.2

| $i$ |  |  |
|-----|--|--|
| 1   |  |  |
| 2   |  |  |
| 3   |  |  |
| 4   |  |  |
| 5   |  |  |
| 6   |  |  |
| 7   |  |  |
| 8   |  |  |
| 9   |  |  |
| 10  |  |  |
| 11  |  |  |
| 12  |  |  |
| 13  |  |  |
| 14  |  |  |

Table 3 of  $C_0$   
= 28 g/150 mL

|    |  |  |
|----|--|--|
| 15 |  |  |
| 16 |  |  |
| 17 |  |  |
| 18 |  |  |
| 19 |  |  |
| 20 |  |  |

B.2

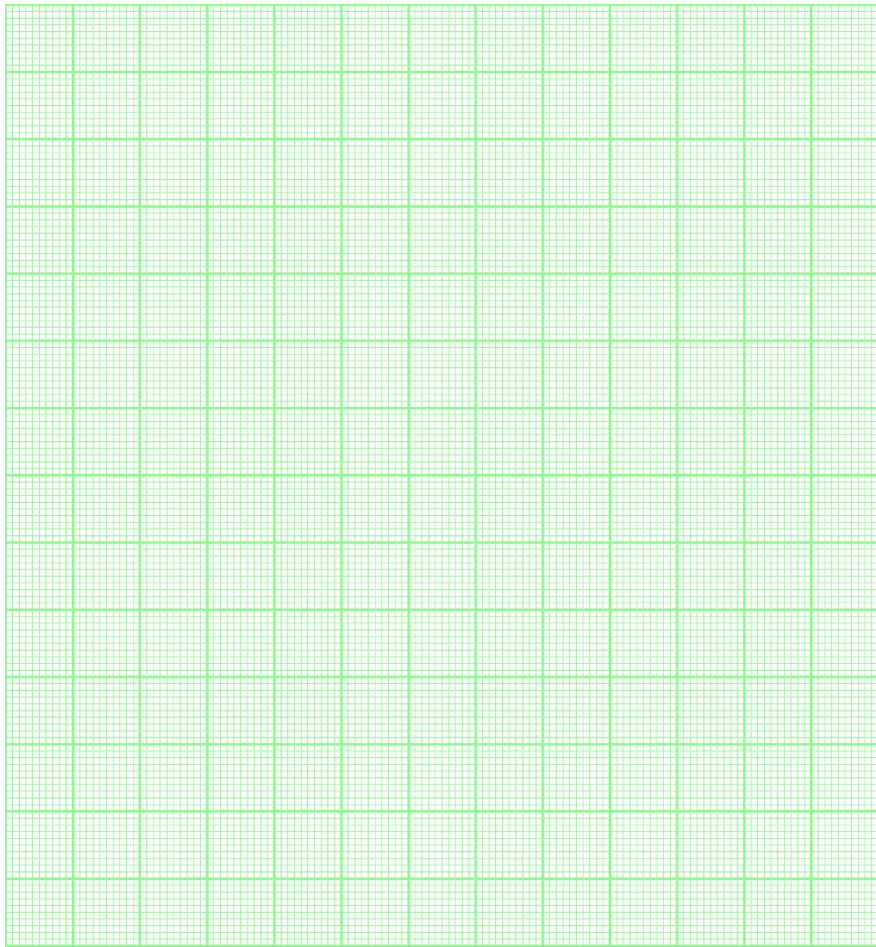


Plot of  
Table 3  
 $C_0 = 28 \text{ g/150 mL}$

$m$  (Steigung im Graphen) =

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|-----------------------------------|
| B.2 | <table border="1"> <tr><td><math>t</math></td><td></td><td></td></tr> <tr><td>1</td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td></tr> <tr><td>13</td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td></tr> <tr><td>16</td><td></td><td></td></tr> <tr><td>17</td><td></td><td></td></tr> <tr><td>18</td><td></td><td></td></tr> <tr><td>19</td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td></tr> </table> | $t$                                       |  |  | 1 |  |  | 2 |  |  | 3 |  |  | 4 |  |  | 5 |  |  | 6 |  |  | 7 |  |  | 8 |  |  | 9 |  |  | 10 |  |  | 11 |  |  | 12 |  |  | 13 |  |  | 14 |  |  | 15 |  |  | 16 |  |  | 17 |  |  | 18 |  |  | 19 |  |  | 20 |  |  | Table 3 of $C_0$<br>= 33 g/150 mL |
| $t$ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 1   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 3   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 5   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 6   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 7   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 8   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 9   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 10  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 11  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 12  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 13  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 14  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 15  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 16  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 17  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 18  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 19  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| 20  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |
| B.2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Plot of<br>Table 3<br>$C_0$ = 33 g/150 mL |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |    |  |  |                                   |





$m$  (Steigung im Graphen) =

B.3

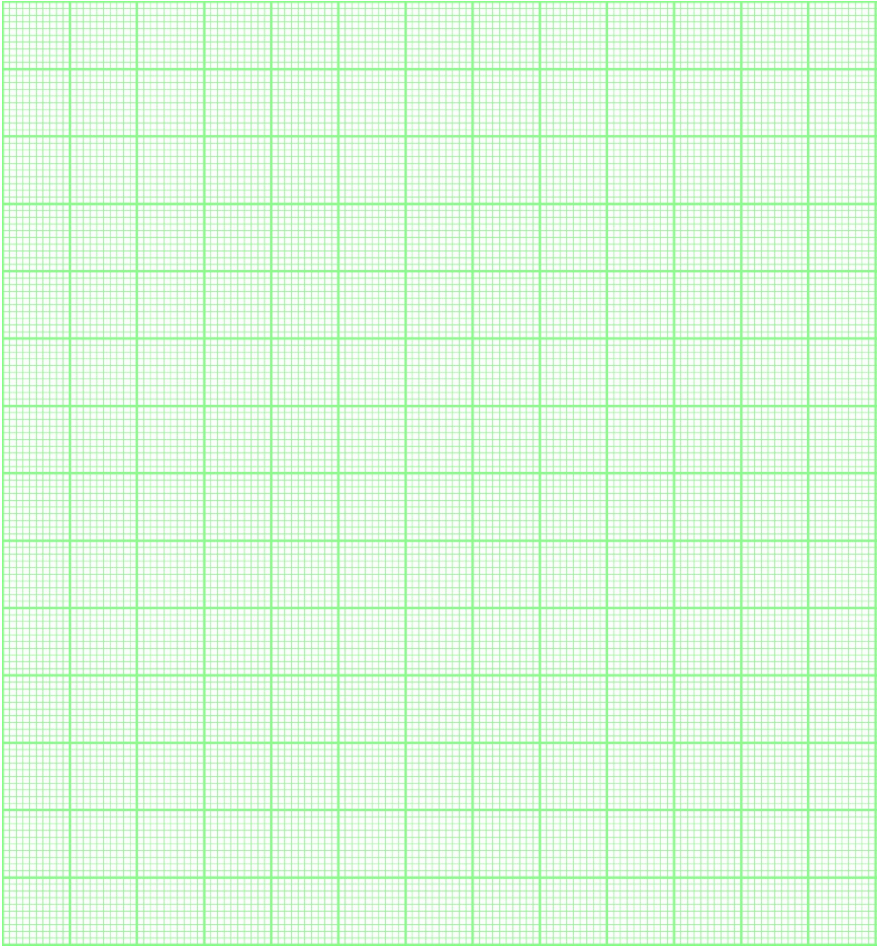
(1,5 pt.)

$D$  für 23 g/150 mL =  $\text{cm}^2/\text{s}$

$D$  für 28 g/150 mL =  $\text{cm}^2/\text{s}$

$D$  für 33 g/150 mL =  $\text{cm}^2/\text{s}$

## C. Nichtlineare Diffusion (1,3 Punkte)

| Frage                    | Antwort                                                                                                | Punkte                                          |
|--------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <p>C.1<br/>(1,3 pt.)</p> |                     | <p>Plot <math>D</math> vs. <math>C_0</math></p> |
| <p>C.1</p>               | <p>Änderungsrate des Diffusionskoeffizienten in Abhängigkeit von der Konzentration der Salzlösung:</p> |                                                 |