

## Measurement of the osmotic shock resistance of Red Blood Cells (RBC)

Table 1: Fill in the table with the table using the formula:  $C_1 \times V_1 = C_2 \times V_2$ .

|   | 1       | 2         | 3                     |           |          |
|---|---------|-----------|-----------------------|-----------|----------|
|   | RBC     | NaCl (ml) | H <sub>2</sub> O (ml) | Fin. Vol. | Fin. OsM |
| A | 0.05ml  | 1.95 ml   | 0 ml                  | 2 ml      | 0.3 OsM  |
| B | 0.05ml  | ml        | ml                    | 2 ml      | 0.2 OsM  |
| C | 0.05 ml | ml        | ml                    | 2 ml      | 0.16 OsM |
| D | 0.05ml  | ml        | ml                    | 2 ml      | 0.15 OsM |
| E | 0.05ml  | ml        | ml                    | 2 ml      | 0.1 OsM  |
| F | 0.05ml  | ml        | ml                    | 2 ml      | 0 OsM    |

After centrifugation of each sample, intact RBC will appear as a pellet on the bottom of the tube. If hemolysis has occurred, the concentration of released hemoglobin in solution can be measured by reading the optical density (OD) of the supernatant at 560 nm, by means of a spectrophotometer. The % of lysis can be calculated by applying the following proportion:  $OD_G:100=OD_X:\%X$ . Plotting “% lysis” as a function of “NaCl final concentration” will result in a curve similar to the one showed below.

