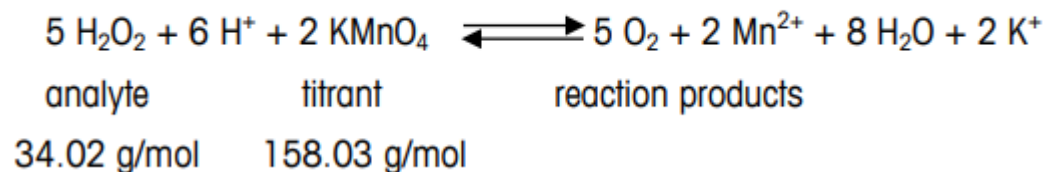


Hydrogen peroxide content determination:



For the hydrogen peroxide content determination three sample solutions were prepared and titrated. The sample size (m), the titrant consumption (VEQ) and the calculated hydrogen peroxide (R) contents for these three measurements are listed in the following table:

Nr.	m	VEQ	R
1	0.334 g	5.338 mL	2.700%
2	0.376 g	5.998 mL	2.695%
3	0.359 g	5.763 mL	2.712%

The calculation for the first measurement is shown in detail:

$$C = M/(10 \cdot z) = 34.02 \text{ g/mol} / (10 \text{ mg}/(\text{g}\cdot\%) \cdot 2) = 1.701 \text{ g}\cdot\% / \text{mmol}$$

$$R_1 = (\text{VEQ} \cdot c \cdot t \cdot C) / m = (5.338 \text{ mL} \cdot 0.1 \text{ mol/L} \cdot 0.9933 \cdot 1.701 \text{ g}\cdot\% \text{ mmol}) / 0.334 = 2.700 \%$$

$$R_1 = (\text{VEQ} \cdot c \cdot t \cdot C) / m = (5.998 \text{ mL} \cdot 0.1 \text{ mol/L} \cdot 0.9933 \cdot 1.701 \text{ g}\cdot\% \text{ mmol}) / 0.376 = 2.695 \%$$

$$R_1 = (\text{VEQ} \cdot c \cdot t \cdot C) / m = (5.763 \text{ mL} \cdot 0.1 \text{ mol/L} \cdot 0.9933 \cdot 1.701 \text{ g}\cdot\% \text{ mmol}) / 0.359 = 2.712 \%$$

As for the titer determination, the mean, s and srel was calculated:

Mean: 2.702 %

s: 0.009 %

srel: 0.33 %