Quantitation of Oxalic acid

Chemicals	**Material**
• Standard solution $c(KMnO_4)$=0.02 mol/L • Oxalic acid - dihydrate • Sulfuric acid, conc. • Water, dist.	• Measuring flask • Heating unit • Thermometer • Volumetric pipette • Measuring pipette • Erlenmeyer flask • Funnel • Spatula • Measuring cylinder • Burette • Pipettind aid • Spray bottle • Drying oven • Analysis balance

Safety tips

- wear protection goggles

- wear adequate safety gloves

Sulfuric acid, conc. • H314, H290 • P280, P301+P330+P331, P305+P351+P338, P309+P310 • HAZARD!! 	Potassium permanganate-solution 0.02 mol/L • H411 • P273 
Oxalic acid-dihydrate • H302+H312 • P261 P302+P352 P304+P340 P312 • ATTENTION!! 	

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Experimental procedure

- Fill up the given oxalic acid solution in a measuring flask und mix
- Use 1/5 of the solution for titration
- The aliquot part is to be filled up with water in a 300 mL -Erlenmeyer flask to approx. 100mL
- Add 10 mL sulfuric acid
- Titrate at 60-70°C with the standardized solution

Waste disposal:

- Dispose of all wastes in the container for acid solutions

Analysis:

- Calculation of the mass of oxalic acid in mg of the given sample

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Preparation list

Chemicals:

- Standard solution c($KMnO_4$)=0.02 mol/L — approx. 400 mL
- Oxalic acid-dihydrate — approx. 1 g
- Sulfuric acid, conc. — approx. 60 mL

Material:

- Measuring flask
- Heating unit
- Thermometer
- Volumetric pipette
- Measuring pipette
- Erlenmeyer flask
- Funnel
- Spatula
- Measuring cylinder
- Burette
- Pipettind aid
- Spray bottle
- Drying oven
- Analysis balance

Preparation of the standard solution

- Each examinee ist to be given 23-25 mL
- Solve 44.12 g oxalic acid dihydratet (=31.51 g oxalic acid) in water and fill up to 1000mL
- 31.51 mg oxalic acid =1.40 mL standard solution c($KMnO_4$)=0.02 mol/L

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