

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION 2023

032

CHEMISTRY ACTUAL PRACTICALS

A CHECKLIST OF CHEMICALS AND APPARATUSES

1.0 IMPORTANT

The National Examinations Council has prepared a checklist of apparatuses and chemicals for Chemistry Actual Practicals examination. As a Head of the school **make sure that all the apparatuses and chemicals** indicated in this checklist are available in the school laboratory. Some of these will be used for Certificate of Secondary Education Examination (CSEE) 2023 Chemistry Practicals. The 03 Hours Practical Advance Instructions will be provided.

2.0 LIST OF APPARATUSES AND CHEMICALS

In addition to the normal fitting of a Chemistry laboratory, the school must prepare the following apparatuses and chemicals for each candidate as will be prescribed in the 03 Hours Advance Instructions.

2.1 Apparatuses

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| ✓• 1 burette (50 ml) | ✓• 1 glass/plastic funnel (brim diameter which ranges from 50 to 100 mm) |
| ✓• 2 test tubes | ✓• 1 stopwatch or stop clock |
| ✓• 1 pipette filler | ✓• 1 glass rod |
| ✓• 1 pipette (20 ml or 25 ml) | ✓• 1 measuring cylinder (10 ml) <i>Add 10pc</i> |
| ✓• 1 conical flask (250 ml) | ✓• 1 measuring cylinder (50 ml) <i>-11- -11-</i> |
| ✓• 1 conical flask cork/rubber stopper | ✓• 1 measuring cylinder (100 ml) |
| ✓• 1 retort stand and a clamp | ✓• 1 thermometer (0 °C–100 °C) |
| ✓• 1 beaker (50 ml) | ✓• 1 heat source for sharing in the ratio of 1:4 |
| ✓• 1 beaker (100 ml) | ✓• 4 g cotton wool |
| ✓• 4 beakers (250 or 300 ml) | ✓• 1 spatula |
| ✓• 1 pyrex beaker (250 or 300 ml) | ✓• 1 watch glass |
| ✓• 1 test tube rack | ✓• 1 A 4 white paper |
| ✓• 1 tripod stand | X• 10 cm length masking tape to be used for labelling |
| ✓• 1 wire gauze | ✓• 1 filter paper |
| ✓• 2 pcs of test tube holders | ✓• 2 both blue and red strips of litmus papers |

2.2 Chemicals

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|-------------------------------|-------------------------------------|
| ✓• 1 g sulphuric acid | ✓• 2 g sodium hydroxide |
| ✓• 2 g hydrochloric acid | ✓• 0.4 g of magnesium ribbon |
| ✓• 2 g hydrated oxalic acid | ✓• 2.0 g of magnesium carbonate |
| ✓• 2.5 g potassium hydroxide | ✓• 4 g hydrated sodium thiosulphate |
| ✓• 1 g acetic acid | ✓• 4 g zinc nitrate |
| X• 3 g potassium permanganate | ✓• 0.5 g silver nitrate |

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|------------------------------------|---|
| ✓• 300 ml distilled water | ✓• 2 g hydrogen peroxide |
| ✓• 0.5 g phenolphthalein indicator | ✓• 2 g nitric acid |
| ✓• 0.5 g methyl orange indicator | ✓• 2 ml ammonia solution |
| ✓• 4 g of ammonium chloride | ✓• 4 g iron (III) chloride |
| ✓• 2 g ammonium sulphate | ✓• 3 g calcium nitrate |
| ✓• 4 g calcium carbonate | ✓• 0.5 g barium chloride |
| ✓• 4 g zinc chloride | ✓• 2.0 g potassium hexacyanoferrate (III) <i>instead;</i> |
| ✓• 4 g iron (II) sulphate | ✓• 2 g copper (II) sulphate |
| ✓• 2 g anhydrous sodium carbonate | ✗• 0.5 g manganese (IV) dioxide |
| ✓• 3 g copper nitrate | ✓• 4 g copper (II) sulphate |
| ✗• 2 g sodium chloride | ✓• 4 g lead nitrate |
| ✓• 0.5 g sodium hydrogen carbonate | |
| ✓• 4 g copper carbonate | |

3.0 OTHER REQUIREMENTS

3.1 Labels

Prepare a marker pen and masking tape for labelling chemicals and solutions.

3.2 Bench Reagents

Ensure that, all bench reagents are available and fresh.