

ROYAL HOLLOWAY, UNIVERSITY OF LONDON
PROCEDURE ASSESSMENT FORM (COSHH – RELATED)
(two-sided form)

Note: To complete this procedure assessment form you will need to refer to the COSHH assessment form for each hazardous substance being used in the procedure/experiment/process.

1.	<p>a. Title of procedure/experiment/process. Analysis of nitrates, phosphates, chloride, potassium and ammonia with the photometer</p> <p>b. Description of procedure/experiment/process. Every analysis requires different reagents (tablets) and different chemical conditions. Therefore the procedure is slightly different in each case and it should be followed according to the manual instructions. For the sake of the risk assessment a general procedure can be written as follows; 1) Using a measuring cylinder, pour a certain volume of your test sample into the polypot. 2) Form a complex compound that absorbs the light in the UV spectrum by mixing the test sample with the appropriate tablets for each test. 3) Measure the transmittance of the solution with the photometer.</p> <p>c. Location of procedure/experiment/process. Field, Lab</p> <p>d. List the substances used (including micro-organisms/dust if applicable) and how each may be hazardous (identify quantities involved, potential routes of entry, hazard classification, Maximum Exposure Limits (MEL) or Occupational Exposure Standards (OES), and possible chronic, delayed, or acute effects, etc. - obtain information from COSHH assessment form for each substance).</p> <p>A list of the substances used and how they may be hazardous is as follows, to obtain information about MEL or OES referred to the COSHH assessment for each substance.</p> <p>Chloride test</p> <p>Chloridol tablets...Silver nitrate, Potassium hydrogen sulphate...Harmful, Irritant, Sensitising agent Acidifying tablets...Potassium hydrogen sulphate...Harmful and Irritant.</p> <p>Nitrate test</p> <p>Nitrates Powder...Zinc dust 65%...Flammable and Harmful Nitratetest tablets...Ammonium chloride...Harmful Nitricol tablets...N-1-Naphethylene diamine hydrochloride <1%, Sulphanilic acid<10%, Potassium hydrogen sulphate...Harmful</p> <p>Ammonia test</p> <p>Ammonia N 1...Sodium Nitroprusside<5%, Salicylic acid<30%...Very toxic, harmful, Irritant sensitising agent, environmental risk. Ammonia N2....Available chlorine 2.5%, Lithium hydroxide 30%...Irritant, corrosive and sensitising agent.</p> <p>Phosphate test</p> <p>Phosphate LR1...Potassium hydrogen sulphate 70%, antimony potassium tartrate<0.1%...Harmful and Irritant. Phosphat LR2...Ammonium molybdate 10%. Sodium metabisulphite 15%...harmful Phosphate HR...Ammonium Molybdate 10%, Ammonium metavanadate 1%...Irritant</p> <p>Potassium</p> <p>Potassium K tablets....Sodium tetraphenyl boron 15%...Harmful, irritant and sensitising agent.</p> <p>e. Will the procedure/process produce intermediates/by-products/products which have the potential to be hazardous to health? If YES, identify quantities involved, potential routes of entry, hazard classification, Maximum Exposure Limits (MEL) or Occupational Exposure Standards (OES), and synergistic or additive effects from the combination of these substances.</p> <p>All products and by products from the above mentioned tests should be treated as the hazard its correspondent reagent poses. Firstly because they will be salts of the correspondent reagent, secondly there will be an excess of reagent that has not reacted with the test sample and finally some substances are catalyst and therefore they don't suffer any transformation.</p> <p>f. Identify any other hazards (other than from the hazardous substances) associated with the procedure/process/experiment (e.g. electrical, pressure, high/low temperature, UV radiation, and any other hazards).</p> <p>Glassware.. Cuts We only use a 10 ml glass measuring cylinder and the cubettes for the photometer. The operator should pay special attention and care to the latest ones because they are very fragile and they to break when treated roughly.</p>
2.	<p>Who may be exposed to risk, for how long and how frequently? (file record sheets of student attendance at relevant practicals with this form)</p> <p>a. During preparation: Operators, lab users.</p>

NOTE: REVIEW OF ASSESSMENTS ARE TO BE CONDUCTED DEPARTMENTALLY AT LEAST EVERY TWO YEARS. FURTHERMORE, A REVIEW OF THE INDIVIDUAL PROCEDURE ASSESSMENT SHALL BE CONDUCTED PRIOR TO CHANGES IN THE USE OF SUBSTANCES TAKING PLACE OR NEW SUBSTANCES/PROCEDURES BEING INTRODUCED.

H & S Office
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