

Standard Operating Procedure

Title: Managing Analytical Reagents

1. Purchased Reagents

- 1.1. On receipt of purchased reagents the date should be recorded on each container so that its approximate age is subsequently known. If multiple containers of one reagent have been received, they should be labelled 'X of Y' (e.g. 1 of 4, 2 of 4, 3 of 4, 4 of 4). The order book should also be signed off at this time and the person who ordered the reagent informed of its arrival. An expiry date as well as the opening date should be added when the reagent is taken into use in the laboratory.
- 1.2. Where the supplier's label or catalogue indicates specific storage conditions then these should be strictly observed.
- 1.3. Where no conditions are specified then the material should be stored in sealed containers at room temperature, in an area preventing exposure to excessive heat and humidity, and commensurate with the potential hazard of the material. Refer to Form-280 for reagent storage locations.
- 1.4. During their life in the laboratory, care should be taken to avoid in-use contamination. It may be useful to divide a large quantity of reagent into smaller containers to prevent contamination to the entire quantity. This is especially useful for reagents, which are very hygroscopic.
- 1.5. If there is doubt about the acceptability of a reagent it should either be retested, or if this is not possible a new supply obtained.

2. Laboratory Prepared Reagents

- 2.1. Laboratory prepared reagents are usually solutions, for example buffers, indicators, and reference standards. They should be stored in suitable glass or plastic containers. Acidic solution must be stored in glass containers and alkaline solution must be stored in plastic containers. Do not use metal container to store either acidic or basic solution. Reference standards may be stored for the duration of their shelf life in volumetric flasks, if necessary. However, volumetric flasks are NOT suitable storage containers for testing solutions and may only be used for short-term storage. All containers must be labelled with Prepared Reagent Labels Form-285. Information includes
 - The name of the reagent
 - Strength and /or dilution
 - Date of preparation and/or standardisation
 - Date of re-standardisation
 - Initials of the analyst who prepared the reagent
 - Expiry date
 - Storage conditions
 - Reference to the raw data, i.e. analysts book and page number.
- 2.2. Preparation and storage conditions should be strictly adhered to (for example, 'prepare fresh', 'standardise immediately before use', 'protect from light', 'store in a plastic container' etc.).

3. Storage Lives

- 3.1. Unless otherwise stated or experience dictates otherwise, solid reagents will normally be stable for a period of five (5) years if stored correctly. No reagent will be kept for more than five years.
- 3.2. Buffer solutions should never be kept for more than three months unless otherwise stated.