

Topfer Reagent

R021

Intended use

Topfer Reagent is used as an indicator in determination of strength of free acids in gastric contents by titration method.

Composition**

Ingredients

Dimethylaminobenzene	0.50 g
95% Ethanol	100.00 ml

**Formula adjusted, standardized to suit performance parameters

Directions

1. Filter the contents of sample through two thicknesses of gauze, if necessary.
2. Take 10 ml of sample and put it in a porcelain evaporating dish and add 1 or 2 drops Topfer Reagent and 1 or 2 drops of phenolphthalein solution (1% alcoholic solution).
3. Titrate with 0.1 N NaOH until the red colour disappears.
4. This reading should be taken for free hydrochloric acid.
5. Continue titration until the red colour of phenolphthalein appears, further addition of alkali does not darken the red colour.
6. Take the burette reading for the total acidity, counting from the original reading.

Principle And Interpretation

Gastric secretion contains hydrochloric acid, secreted by the parietal cells of the fundus and upper body of the stomach and an alkaline enzyme-mucoprotein complex secreted by the superficial mucosal cells. There are two laboratory methods for gastric analysis. The tubeless technique investigates the ability of the stomach to produce acid. The incubation technique allows measurement of gastric secretion under basal and maximal output conditions and gives the quantitative values of gastric secretion. Topfer reagent is used for titration of acid with 0.1 N sodium hydroxide and phenolphthalein

Type of specimen

Clinical specimen : gastric contents

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines.

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be

Limitations

1. While HCL is the only naturally accruing mineral acid, which will turn Topfer Reagent red, there are variety of organic acids contributing to the total acid.
2. Mucus neutralizes acid and causes low results.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- **Appearance :** Orange coloured solution.
- **Clarity :** Clear without any precipitate.
- **Test :** Gastric analysis is carried out using Topfer reagent as an indicator for the titration of gastric acid with 0.1 N sodium hydroxide and phenolphthalein.
- **Results :**

Can be calculated as : % Free HCl acidity = No. of mm from beginning x 10 to the first reading

% Total acidity = No. of mm from beginning x 10 to the last reading

Storage and Shelf Life

Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Reference

1. Godkar B. P., 1996, Textbook of medical laboratory technology: 12(168-169)
2. Lapage S., Shelton J. and Mitchell T., 1970, Methods in Microbiology', Norris J. and Ribbons D., (Eds.), Vol. 3A, Academic Press, London.
3. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore.



Storage temperature



Do not use if package is damaged



In vitro diagnostic medical device



CE Marking



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