Cyto-Stat Red
Cytology Preservative/ Fixative
Technical Data Sheet & IFU

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CytoStat Red Cytology Preservative/Fixative is an alcohol based general purpose fixative solution with hemolytic properties. It is intended for cytology and small biopsy processing. Its active ingredients comprise of alcohols, formaldehyde, and non-toxic buffers and stabilizers. It is used to prepare cells and small tissue fragments for cytological and histological examination and diagnosis.

APPLICATIONS

CytoStat Red is intended for the fixation and preservation of cells and small tissue fragments in suspension. It is used to prepare them for cytological and histological examination. CytoStat Red lyses red blood cells, solubilizes most proteins, and fixes cells and small tissue fragments. It is compatible with IHC staining and results are comparable to those achieved with neutral buffered formalin and other cytological fixatives.

STORAGE/ SAFETY

Storage: Room Temperature
Refer to SDS for details
Unfixed cytological specimens may contain infectious agents. Wear appropriate protection and follow biohazard precautions when handling specimens. Do not ingest and avoid direct contact. CytoStat Red contains alcohol and formaldehyde.

GENERAL INFORMATION

CytoStat Red can also be used for diagnostic non-gynecological cytology specimens that include, sputum, washings, brushings, body fluids, scrapings, and fine needle aspiration biopsies. Cells and small tissue fragments that have been fixed in CytoStat Red may be processed using imaging processors, cytospin instruments, various other preparation techniques, and cell block methods.

ORDERING INFORMATION

Product	Product Code	Size	Packaging
Cyto-Stat Red	CSR-1	1 Gallon	Each
Cyto-Stat Red	CSR/120ML	120 mL Container	96/case

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PROCEDURES

General Specimen Preparation

Note: Preparation time can be significantly reduced if specimens are collected in CytoStat Red prior to arriving in the laboratory. This will eliminate the need to allow time to preserve and lyse during processing.

A. Body Cavity Fluids, Washings, Brushings (Large Volume) – Received Fresh (unfixed)

1. Mix/Shake the entire sample well.
2. Pour a representative amount into a properly labeled 50 milliliter disposable centrifuge tube. (Two centrifuge tubes may be used for large volume/clear fluids).
3. Centrifuge the sample(s) for 10 minutes at 600g.
4. Decant the supernatant fluid (combine pellets if two tubes were used for a specimen) and add 25 milliliters of CytoStat Red.
5. Cap the tube and vortex for 10-15 seconds or until the cell button/pellet appears to be broken apart and mixed thoroughly through the fluid.
6. Allow the sample to fix and lyse for at least 15 minutes. (For best results with very bloody specimens, allow the sample to fix for at least 30 minutes).
7. Process specimen according to current laboratory preparation technique.

- If specimen is received prefixed in CytoStat Red:

  1. Centrifuge the sample for 10 minutes at 600g.
  2. Decant/Pour off the supernatant fluid.
  3. Vortex to mix the cell button/pellet.
  4. Process specimen according to current laboratory preparation technique.

B. **Fine Need Aspirates**

1. Collect or mix the specimen with 10 ml of CytoStat Red (add more for very bloody specimens). Prefilled containers are also available for this application.

- If specimen is received prefixed in CytoStat Red:

  1. Centrifuge the sample for 10 minutes at 600g.
  2. Decant/Pour off the supernatant fluid.
  3. Vortex to mix the cell button/pellet.

C. Sputum

Collect or mix (1) volume of specimen with (5) volumes of CytoStat Red. Prefilled containers are also available for this application.

- If specimen is received prefixed in CytoStat Red:

  1. Vortex vigorously, or place specimen on shaker for 15-30 minutes to allow mucous to soften. (Cells can be separated from softened liquid mucous by vigorous agitation).
  2. Some applications may require that the soft mucous be filtered before preparation. Using a biohazard hood, pour the softened specimen through a filtration barrier (gauze or biopsy bag) into a 50 milliliter centrifuge tube.
  3. Centrifuge the sample for 10 minutes at 600g.
  4. Decant/Pour off the supernatant fluid.
  5. Vortex to mix the cell button/pellet.
  6. Process specimen according to current techniques.

- If specimen is received fresh:

  1. Mix (1) volume of specimen with (5) volumes of CytoStat Red.
  2. Vortex vigorously, or place specimen on shaker for 15-30 minutes to allow mucous to soften.
  3. Centrifuge the sample for 10 minutes at 600g.
  4. Decant/Pour off the supernatant fluid.
  5. Vortex to mix the cell button/pellet.
  6. Process specimen according to current laboratory preparation techniques.

D. **Urines (Optional)**

Caution: If your laboratory comments on blood in urine, do not use CytoStat Red as it will lyse Red Blood Cells. Use another type of non-lysing fixative.

1. Collect or mix (1) volume of specimen to (1) equal volume of CytoStat Red. Prefilled containers are also available for this application.

- If specimen is received prefixed in CytoStat Red:

  1. Centrifuge the sample for 10 minutes at 600g.
  2. Decant/Pour off the supernatant fluid.
  3. Vortex to mix the cell button/pellet.
  4. Process specimen according to current laboratory preparation techniques.

- If specimen is received fresh:

  1. Centrifuge the sample for 10 minutes at 600g.
  2. Decant/Pour off the supernatant fluid.
  3. Add 25 milliliters of CytoStat Red.
  4. Vortex to mix cell button/pellet.
  5. Allow the sample to fix for at least 15 minutes. For best results with bloody specimens, fix the sample for at least 30 minutes.
  6. Process specimen according to current laboratory preparation techniques.

2016, July 14

4. Process specimen according to current laboratory preparation technique.

- If specimen is received fresh (unfixed in saline, etc.):

1. Centrifuge the sample for 10 minutes at 600g.
2. Decant/Pour off the supernatant fluid and then add 25 milliliters of CytoStat Red to the specimen. (Add more CytoStat Red for very bloody specimens).
3. Vortex to mix the cell button/pellet.
4. Allow the sample to fix and lyse for at least 15 minutes. (For best results with bloody specimens, fix the sample for at least 30 minutes).
5. Process specimen according to current laboratory preparation techniques.

TECHNICAL NOTES

CytoStat Red is recommended to be stored at room temperature. The shelf life is two years from its manufacturing date and specimens fixed in CytoStat Red are stable for at least 30 days. Cytological samples should be fixed in CytoStat Red as soon as possible after collection. A sample that has become degraded prior to fixation will be unsatisfactory for examination. CytoStat Red should not be used to fix tissue fragments larger than 5 millimeters. CytoStat Red will not perform as well on pre-fixed specimens containing Carbowax (polyethylene glycol). Reference material includes Tripath Cyto-Rich Red IFU and Manual of Cytotechnology.

CONTACT INFORMATION

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