

Instructions for Use

Snap N' Digest



CATALOG NUMBER	DESCRIPTION	UNIT OF MEASUREMENT
667	Snap n' Digest 75ml	10 bottles/pkg
668	Snap n' Digest 150ml	10 bottles/pkg

INTENDED USE

Snap N' Digest is made to facilitate the digestion and decontamination of clinical specimens (such as sputum, bronchial or tracheal lavage) suspected to contain mycobacteria, especially *Mycobacterium tuberculosis*.

SUMMARY AND EXPLANATION

Most clinical specimens that are sent to the laboratory for culture of suspected Mycobacterial infection are contaminated by rapid growing normal flora. To maximize the Mycobacterial yield of a clinical specimen, N-acetyl-L-cysteine (NALC) is used with the clinical specimen as a digesting, decontaminating, and mucolytic agent. NALC is effective as a digestant only in the reduced form: when oxidized to the cystine. In the reduced state, the chemical acts to break disulfide bonds that are rich in mucus and ultimately to thin out the mucoid sputum. The NALC in a dry powder form is sealed in glass ampules. The NALC remains in its unreduced state and retains its potency until the ampule is broken and added to the specimen. The Sodium Hydroxide acts as a decontamination fluid destroying the host normal flora except the *Mycobacterium tuberculosis* and other species.

PRINCIPLE OF THE PROCEDURE

In the Snap N' Digest reagent bottle, the N-acetyl-L-cysteine (NALC) is combined with 2% Sodium Hydroxide (NaOH). When the glass ampule containing NALC is broken and mixed with NaOH-citrate solution, this mixture provides effective digestion and decontamination for clinical specimens. Snap N' Digest solution is added in equal amounts to the clinical specimen.

COMPONENTS

Snap N' Digest in 75ml bottle or 150ml bottles (buffer packets included):

Liquid – Trisodium citrate (0.1M) 2.9% / Sodium hydroxide 2.0%

Capsule – N-acetyl-L-cysteine (NALC) 0.375grams per ampule

WARNINGS

Do not use product beyond the expiration date.

Break glass ampule close to its center one time. Do not manipulate glass ampule plastic bottles may puncture from glass, and injury may occur.

Do not use reagents if ampules do not appear to contain powder or if capsules are broken, missing or there is visible evidence of deterioration (e.g. reagent develops yellow color). Do not use phosphate buffer if packages are torn or unsealed.

STORAGE

Store at room temperature (15°C to 30°C).

Do not freeze. Do not open until ready for use.

PROCEDURE

Preparation of Phosphate Buffer: (prepare as needed)

Once Phosphate buffer solution is made; it should be sterilized and used immediately. If held longer, maintain sterility and refrigerate for no longer than three days.

1. Pour entire contents of one buffer package (included in Snap N' Digest kit) into a 500 mL flask and add 500mL deionized water.
2. Mix with stirring rod, then autoclave at 121°C for 15 minutes.
3. Allow buffer to cool, use as needed.

REAGENT USE:

1. Prior to use, loosen screw-cap on the plastic bottle. Locate ampule in bottle and squeeze bottle in the upright position until ampule breaks. (Note: 75ml bottle contains one ampule to break and 150ml has two).
2. Shake gently to dissolve the NALC. Try not to cause foaming in the bottle and avoid excessive shaking or agitation. **ONCE AMPULE IS BROKEN, USE REAGENT WITHIN 24 HOURS.**
3. In a biological safety hood, use an aerosol-free 50 ml centrifuge tube with screw cap. Add equal amounts of clinical specimen and activated Snap N' Digest solution (approximately 10ml of each) to tube.
4. Cap centrifuge tube and mix on a Vortex until specimen is liquified. If the specimen is especially viscous, add more digestant and repeat mixing.
5. Allow mixture to stand at room temperature for approximately 15 minutes and occasionally mix/shake tube gently.
6. Add sterile phosphate buffer (pH 6.8) (see section above for instructions to make buffer) to the 50 mL mark on centrifuge tube and mix. Centrifuge for 15 - 20 minutes at 3000 X g.
7. Decant supernatant fluid into discard container which contains 5% phenol or an equivalent disinfectant.
8. Add a small quantity of phosphate buffer to tube and re-suspend the sediment. Use the sediment for preparation of smears and Mycobacterial procedures and cultures.

EXPECTED RESULTS

When used correctly, Snap N' Digest will digest and decontaminate clinical specimens suspected to contain Mycobacteria.

QUALITY CONTROL

Use established laboratory quality control procedures for Mycobacterial specimens. Record in quality control manual.

LIMITATIONS

No one method of digestion-decontamination is suitable for all specimens. When selecting a procedure, choose the procedure that will be less harmful to the specimen, but will reduce contamination.

SAFETY

For *In vitro* diagnostic use. See SDS for additional information.



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Use biosafety level 2 practices and procedures when preparing specimens that might contain mycobacteria.

Reagents contain strong alkali and can cause burns.

Gloves/eye/face protection must be worn.

NaOH is irritating to eyes and skin. In case of eye or skin contact, flush immediately with copious amounts of water. Consult a physician. If ingested, give milk, egg white, or large amounts of water.

REFERENCES

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3. Krasnow, I and Wayne, L.G. Comparison of methods for tuberculosis bacteriology. Appl. Microbiol. 8:915, 1969.
4. Vestal, A.L. Procedures for the isolation and identification of Mycobacteria. U.S.P.H.S. Publ. 75:8230, Center for Disease Control, Atlanta, Ga. 1975.
5. Isenburg, Henry D. Clinical Microbiology Procedures Handbook. ASM Press 2004.

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