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## Isotonic Medium S™

Cat No: IMS10  
For in vitro use only

### Isotonic Medium S™

In vitro reagent (not for internal use)

*Isotonic medium with protein milieu for collecting biological specimens in fresh unfixed state.*

Standardized to be used for collecting and transporting unfixed fresh cytology specimens including FNAB needle rinses, brushings, washings etc. for cell block and comparable testing.

#### **Composition:**

Component #1: Pre-dispensed dry protein reagent

Component #2: Aqueous isotonic diluent with preservative

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Storage conditions: 2-8°C.

Shipping conditions: ambient

Shelf life: 12 months from date of manufacture

Component #1 tube with dry reagent should be reconstituted with the diluent provided as Component #2 before use about 6 hours in advance.

The reconstituted Isotonic Medium S™ may be used for up to 1 week if stored at 2-80 °C.

The fresh unfixed specimens collected in Isotonic Medium S should be stored at 2-8°C and processed / fixed within 24 hours.

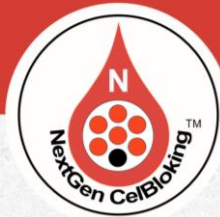
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For additional questions, please contact Technical Support at Phone: 262 797 0323  
or e-mail to [bioinnovationllc@gmail.com](mailto:bioinnovationllc@gmail.com)

**AV BioInnovation LLC**  
PO Box: 143 , Grosse Ile, MI 48138 USA  
[www.avbioinnovation.com](http://www.avbioinnovation.com)



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### Introduction:

From Open Access publication (1): *CytoJournal* 2019, 16:12

Available FREE in open access from:

[http://www.cytojournal.com/temp/CytoJournal16112-3882578\\_104705.pdf](http://www.cytojournal.com/temp/CytoJournal16112-3882578_104705.pdf)

Fresh, unfixed cytology specimens allow flexibility of practicing the best algorithm for processing cytology preparations including cell-blocks with better outcome. In addition, unfixed specimens, such as various body fluids, washings, and needle rinses in isotonic media allow lysis of erythrocytes and removal of blood contamination related interference with BloodLyz™ for best cell-blocks (4).

Specimens collected in different fixatives and collection media other than in isotonic medium or 10% formalin may interfere with results of immunostains and different molecular tests mostly standardized on FFPE. Collecting directly in formalin will overcome some of these limitations, but will not allow making of cytology smear preparations from the same formalin fixed cytology specimen. Formalin collected specimens will not allow for the removal of blood contamination related interference.

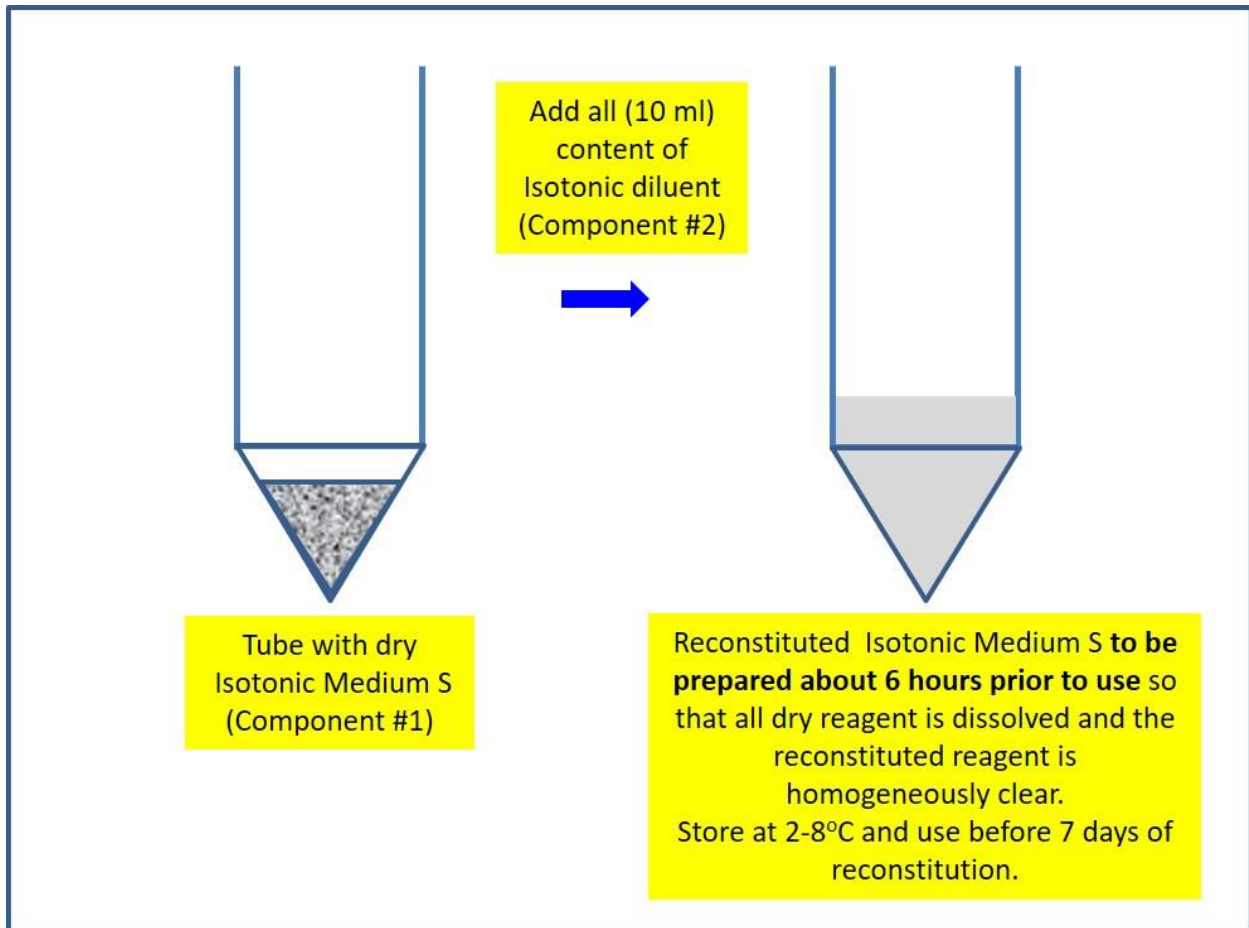
In general, the practice of collecting cytology specimens in weak alcohol fixatives including Saccomanno Collection Fluid [51], various liquid based cytology collection media such as Cytolyt™, PreservCyt® (ThinPrep) [52], or CytoRich™ Red preservative (SurePath) [53] would interfere with the IHC integrity and the results may not be comparable with the published data on FFPE based tissue.

For these reasons, it is recommended to collect cytology specimens in isotonic medium such as saline, RPMI [57], or other isotonic mediums with protein milieu including proprietary Isotonic Medium S™ [5]. Collecting the fresh unfixed cells directly in plain saline without protein milieu may compromise the structural integrity of some of the cells with potential destruction/loss of some diagnostic cells. RPMI is expensive with frequent contaminant overgrowth. The better, simpler option is isotonic medium with protein milieu with preservative such as Isotonic Medium S™ [34].

FNA needle rinses and other cytology specimens including brushings may be collected in such media to be submitted to the cytology lab as a fresh, unfixed specimen for processing. If delay in transport and processing is expected, the specimen may be transported on ice at cold temperature without letting it freeze. Such specimens may be processed to make cytology preparations and make cell-blocks that would be processed as formalin fixed tissue similar to the surgical biopsy processed as FFPE.

**Protocol for reconstituting 'Isotonic Medium S' (IMS):**

1. Reconstitute dry component #1 by adding entire 10 ml aqueous reconstitution medium as component #2.
2. Let the reconstitution homogenize thoroughly at 2-8°C and use after about 6 hours.
3. Reconstituted IMS should be stored at 2-8°C and used the **within 1 week of reconstitution**.



**Figure 1.** Reconstitution of working Isotonic Medium S (IMS) by adding Isotonic diluent (Component #2) to the tube with dry IMS (Component #1).

**Protocol for storing reconstituted IMS:**

Reconstituted IMS should be stored at 2-8°C and used the **within 1 week of reconstitution**.



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### Protocol using 'IMS':

1. Bring the reconstituted IMS closer to the room temperature before use.
2. Collect the FNAB needle rinses in reconstituted IMS.
3. The rinsed needle should not be reused\*.
4. The fresh unfixed specimens collected in IMS should be stored at 2-8°C and processed / fixed within 24 hours.

\* If the needle is planned to be reused, it should be rinsed in sterile saline and the final cumulative rinses in saline from same specimen should be transferred in entirety to reconstituted IMS.

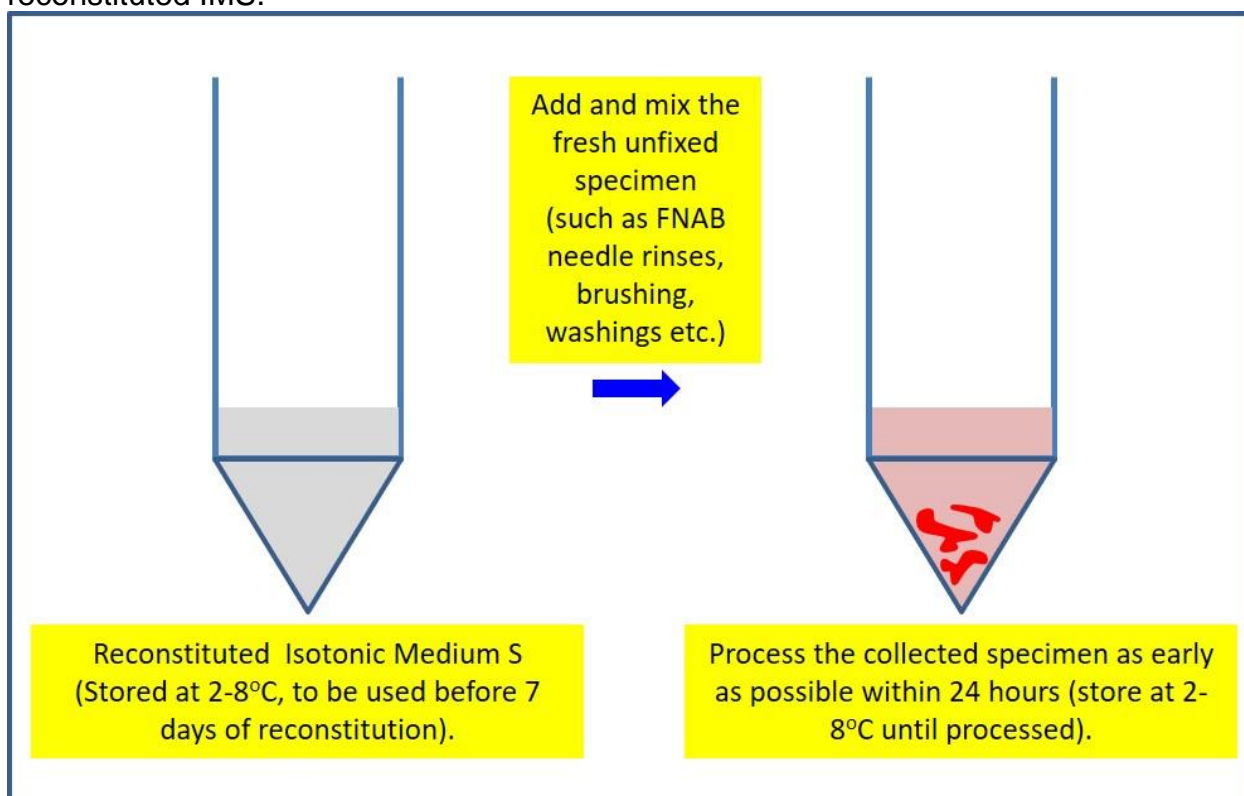


Figure 2. Collection of fresh unfixed specimen in IMS (Do not reuse the needle or device rinsed in the IMS as it is not sterile. In case the needle or device has to be reused, please collect the specimen in sterile container with sterile saline and transfer the final rinse to IMS container).

**LINK for downloading datasheet (MSDS sheet):**

<http://alturl.com/rbbmh>



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52. 50. ThinPrep Non-Gyn  
[http://www.thinprep.com/hcp/lab\\_professionals/thinprep\\_non\\_gyn.html](http://www.thinprep.com/hcp/lab_professionals/thinprep_non_gyn.html)



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53. 51. BD CytoRich™ non-gyn

<https://www.bd.com/en-us/offerings/capabilities/cervical-cancer-screening/non-gyn-cytology/cytorich-fixatives>

57. RPMI 1640. [https://en.wikipedia.org/wiki/RPMI\\_1640](https://en.wikipedia.org/wiki/RPMI_1640)

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or e-mail to [bioinnovationllc@gmail.com](mailto:bioinnovationllc@gmail.com)

**AV BioInnovation LLC**  
PO Box: 143 , Grosse Ile, MI 48138 USA  
[www.avbioinnovation.com](http://www.avbioinnovation.com)