Catalogue# **09-991-AVM100**
AV marker for cell blocks
(100 AV markers per unit)

AV Marker

AV marker is a dark beacon which is incorporated in the cell block for facilitating the proper monitoring of depth while cutting the cell blocks on the microtome [1].

Without the AV marker, the depth of most of the cell blocks with scant, colorless cellular material may be difficult to judge. This leads to cutting too deep in to the cell block with loss of diagnostic cells or too superficial without any cells in the sections. [1]

AV marker also acts as a reference point to orient the sections on different slides while interpreting the coordinate immunostaining with SCIP (Subtractive Coordinate Immunoreactivity Pattern) approach [2] for evaluating the immunocytochemistry in the cell block sections.

References:

1. Varsegi G.M., Shidham V. (2009). Cell Block Preparation from Cytology Specimen with Predominance of Individually Scattered Cells. J Vis Exp. (*JoVE- Journal of Visualized Experiments)* 2009 Jul 21;(29). pii: 1316.
doi: 10.3791/1316. PMID: 19623160
Video article is available FREE on web as open access at-
http://www.jove.com/index/Details.stp?ID=1316

2. Shidham VB, Atkinson BF. Immunocytochemistry of effusion fluids: Introduction to the SCIP approach. In: Shidham VB and Atkinson BF. Editors *'Cytopathologic Diagnosis of Serous Fluids'* First edition, Elsevier (W. B. Saunders Company); 2007. Ch 5, pp. 55-78.

AV Marker for Cell Blocks

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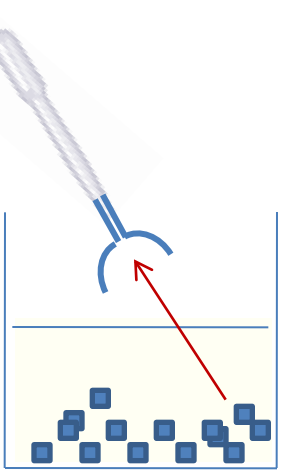
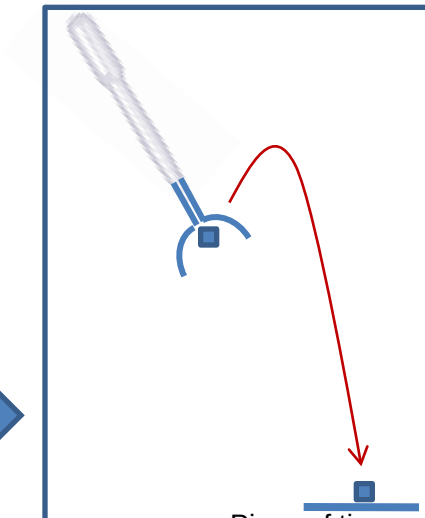
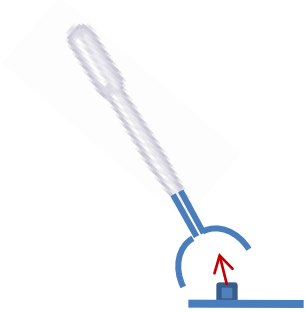


Pick up the **AV marker** with specially provided pipette.

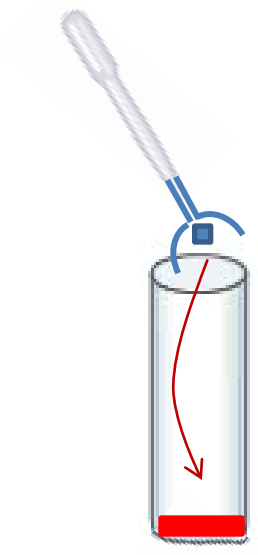


Piece of tissue paper

Decant excess storage fluid associated with **AV-marker** by placing on an absorbent such as tissue paper.



Pick up the **AV-marker**



Transfer the **AV-marker** to cell-block sediment

Directions on how to pick up and handle the AV markers

(The AV markers are relatively friable and should not be picked with crushing pressure such as with forceps)

For cell block making protocols with HistoGel™ and with Plasma-Thrombin method- see next pages.

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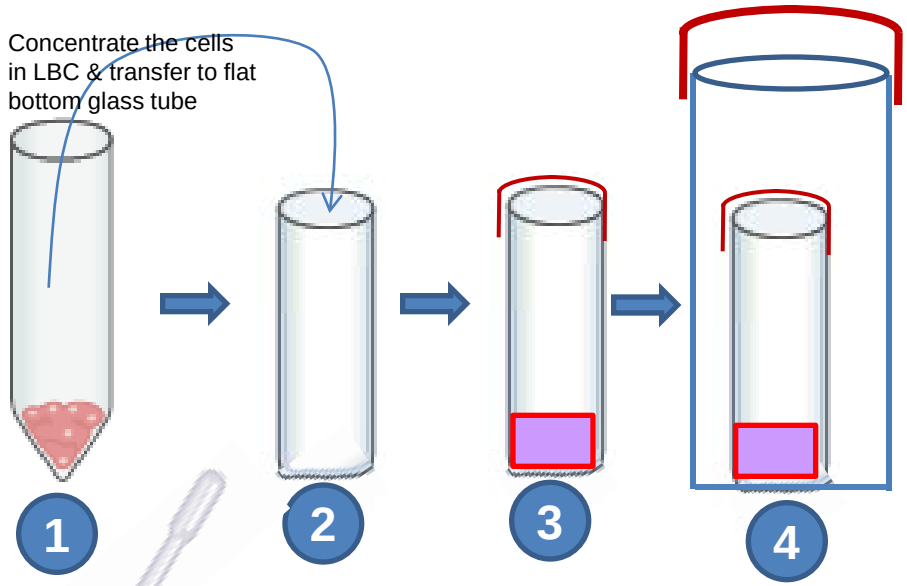
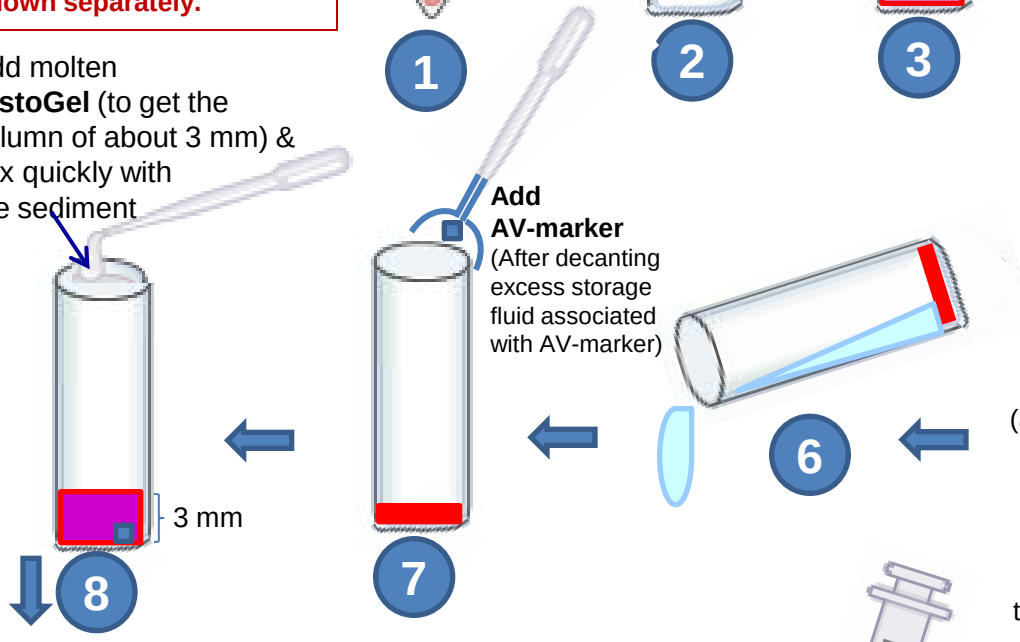
This is an example for showing protocol application using **HistoGel™**

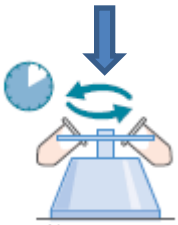
However, it *may be modified for other methods* after appropriate modifications. **Modification for *Plasma-Thrombin method* is shown separately.**



Add molten **HistoGel** (to get the column of about 3 mm) & Mix quickly with the sediment

Add AV-marker (After decanting excess storage fluid associated with AV-marker)





Centrifuge at **1800 G** (3000 rpms, rotor radius- 17 cm for 5 minutes) [cups should be swivelling (& not fixed angle) so that the cells fall perpendicularly on the bottom of flat bottom glass tube]

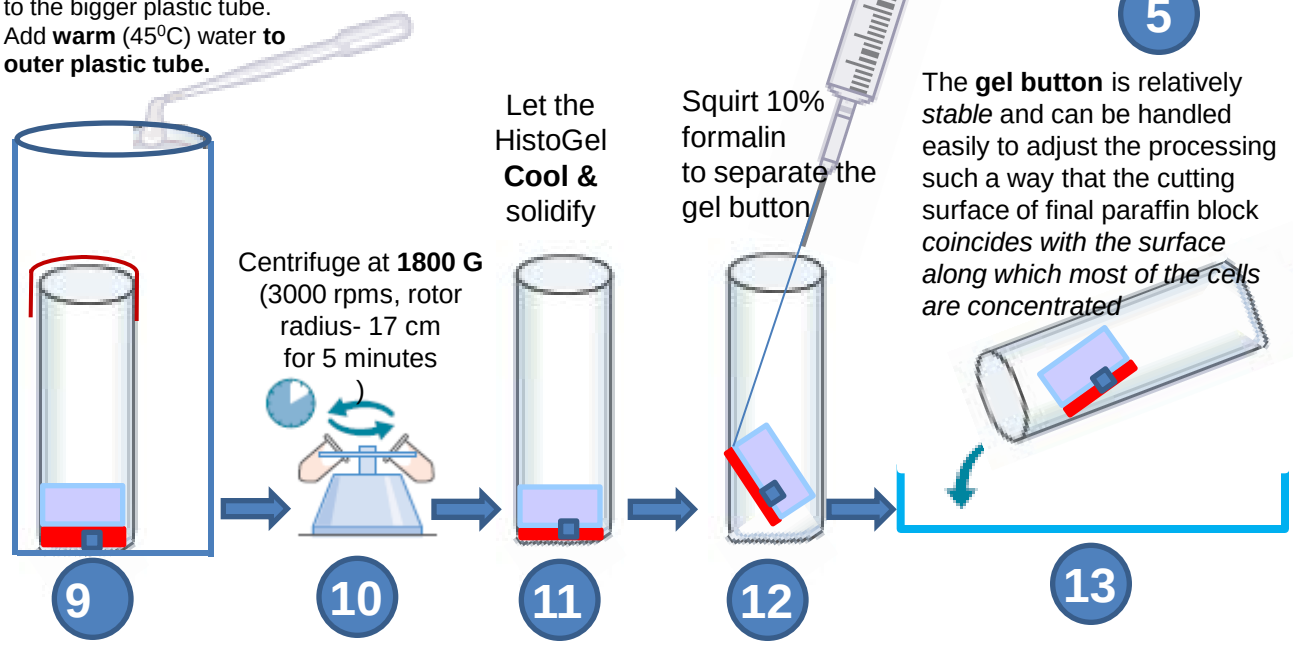
5

Cap the glass tube and transfer to the bigger plastic tube. Add **warm** (45^0C) water **to outer plastic tube.**

Let the HistoGel **Cool &** solidify

Squirt 10% formalin to separate the gel button

Centrifuge at **1800 G** (3000 rpms, rotor radius- 17 cm for 5 minutes)



The **gel button** is relatively *stable* and can be handled easily to adjust the processing such a way that the cutting surface of final paraffin block *coincides with the surface along which most of the cells are concentrated*

The summary of different steps for preparing cell block by Shidham's protocol using HistoGel™

For FREE video visit- J Vis Exp 2009 Jul 21;(29). pii: 1316 http://www.jove.com/index/Details.stp?ID=1316

Modification for *Plasma-Thrombin method.*