

# FFPE Specimen (slides or block submission) Preparation Instructions

**NOTE FOR BONE SAMPLES: DO NOT USE** strong acids (e.g. hydrochloric acid, sulfuric acid, picric acid) as these destroy nucleic acid. When decalcification is required, ethylenediaminetetraacetic acid (EDTA) is recommended. Place sample in decalcifying solution for minimal amount of time. Using a weaker acid and shorter time for decalcifying preserves the nucleic acid and increases likelihood for getting results on bone samples

## 1 SAMPLE TYPE

Formalin-fixed, paraffin embedded (FFPE) BLOCK or 16 unstained slides (+ 1 Hematoxylin and eosin stain (H&E) slide)



Tissue should be formalin-fixed and embedded into a paraffin block. Use standard fixation methods with 10% neutral-buffered formalin. DO NOT use other fixatives (AZF, B5, Bouin's, Holland's). If sending slides, send 16 unstained slides (charged and unbaked, with tissue cut at a 5 micron thickness) plus 1 H&E slide.

Other types of FFPE specimens can include:

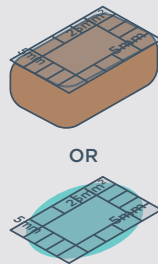
- Needle core or excisional biopsies of haematologic malignancies or sarcomas
- Cytology cell blocks of pleural or ascites fluid
- Bone marrow aspirate clot sections (bone marrow aspirate can be allowed to clot naturally, placed in formalin fixative, and then embedded into a paraffin block)
- Bone marrow core biopsies (see information above regarding decalcification)

Specimens of suboptimal size, cellularity, or tumour content may require additional unstained slides or an alternate tissue block to be provided.

## 2 SURFACE AREA

Optimum: 5 x 5 mm<sup>2</sup>

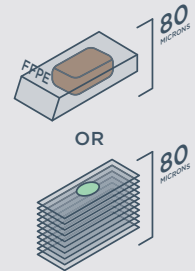
Tissue should have a surface area of at least 25 mm<sup>2</sup> (5 x 5 mm<sup>2</sup>, 2.5 x 10 mm<sup>2</sup>).



## 3 SURFACE VOLUME

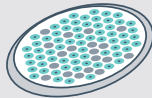
Optimum: 2 mm<sup>3</sup>

Optimal sample volume can be achieved by sending optimal tissue surface area (25 mm<sup>2</sup>) at a depth of ≥80 microns. For suboptimal tissue surface area, additional depth is required.



## 4 NUCLEATED CELLULARITY

DNA is extracted from nucleated cells. Samples with low nucleated cellularity (e.g. those with abundant mature erythrocytes, lesional cells that contain excessive cytoplasm, or tissue with extensive associated fibrosis) may require greater tissue volume to yield sufficient DNA at extraction.

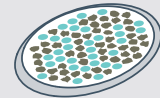


## 5 TUMOUR CONTENT

Minimum: ≥20%

If the ratio of nucleated malignant to nucleated non-malignant cells is too low, sensitivity of detection of certain classes of alterations is reduced. High tumour content is preferable.

**Note for liver specimens:** Higher tumour content may be required because hepatocyte nuclei have twice the DNA content of other somatic nuclei.



**Note:** All cytologic and histologic specimens will be reviewed internally by a pathologist and a determination of sample adequacy will be made. Additional or alternate material may be requested for optimal analysis.



Roche Products (New Zealand) Ltd,  
98 Carlton Gore Road, Newmarket, Auckland 1023  
Postal Address: PO Box 109113, Newmarket, Auckland 1149  
Customer Services Team: 0800 880 177

More information can be found at [www.foundationmedicine.co.nz](http://www.foundationmedicine.co.nz).

