

Microwave Tissue Processor

Cost: \$40,000 (2012)

The following is an extract of a note from Dr. Blair Whittemore, Head of Haematology/Oncology (Montreal Children's Hospital).

Below is a brief outline of how this equipment will be used. It will be of great value to the Pathology department who are an essential member of our team as we depend on them for an accurate and timely diagnosis re our oncology cases. We are extremely fortunate in that we have a very strong group who work well with us. In addition this equipment will be most useful for Dr. Jabado and her research team obviating the necessity for fresh frozen tissue for many of her studies.

The microwave tissue processor will have several functions, both in diagnostic and research pathology. It will replace manual processing of electron microscopy specimens: this requires 24-48 hours, but with the device, the process will be completed the same day the specimen is received. We will also use it for same-day histology processing of urgent specimens as well as a back-up histology processor when the main processor requires maintenance. (Currently, specimens have to be sent to the MGH* for processing in these instances, which causes considerable delays.) Finally, we want to use it to implement a special alcohol-based fixation protocol with rapid low-temperature processing for tumor samples (particularly brain tumors), that will better preserve cell components like DNA, RNA, and proteins. This will allow use of routine histology material for many research applications that currently require fresh frozen tissue.

* Montreal General Hospital