

**WORK LOAD ANALYSIS OF NEW  
LIQUI-PREP™ SYSTEM vs THE CYTYC T2000™ SYSTEM**

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**Introduction/Purpose:** To compare the throughput of the new **Liqui-PREP™ System** (LGM International Inc., Ft. Lauderdale, Florida) to the throughput of the **ThinPREP T2000** (Cytoc, Marlborough, MA) automated processor in a clinical cytology lab.

**Materials and Methods:** The laboratory has been a user of T2000 for a number of years. Previous workflow analysis had demonstrated with one (1) T2000 the mean processing time for one specimen was 5-6 minutes. In order to maximize time and efficiency by a single technologist, two (2) T2000 processors were required to justify a single dedicated FTE to processing. Processing time included administrative time (labeling) and hands-on processing time (changing filters, fix bath, etc). This approach allowed one FTE to prepare the second unit while the first unit was running. Approximate capital outlay of \$75,000 for equipment plus one FTE. The new **Liqui-PREP™ System** was similarly analyzed to realize throughput capabilities for this new manual LBC system. Our technologists reviewed the protocol to define which processing steps could be batched to maximize efficiencies. We opted not to follow the manufacturer protocol but customize for our lab. Operationally it was concluded all specimens would be treated with **Liqui-PREP™ Cleaning Solution**, an optional step to reduce costs. A sample tube rack, vortex, 28-head centrifuge, pasture pipette, alcohol bath and 1 cc syringe were identified as required equipment. Approximate capital outlay of \$10,000 (centrifuge and vortex) and one FTE

**Results:**

	<b>Slides/hour (slide/min)</b>	<b>Slides/day (6hr)</b>	<b>Annual Volume</b>	<b>Capital</b>	<b>Annual<sup>1</sup> Cost/slide</b>
Cytoc T2000 (2)	20 (3.0min)	120	31,200	\$75,000	\$1.25
Liqui-PREP	40 (1.5min)	240	62,400	\$10,000	\$0.05

<sup>1</sup>Three (3) year depreciation used on capital outlay.

**Conclusion:** The manual **Liqui-PREP™ System** had substantially more efficient operational throughput than the T2000 automated system. The significantly lower capital outlay provides additional rationale for moving to this new LBC technology. The slides were of high quality and reproducible. The system can also process bloody specimens producing highly diagnostic slides. Our laboratory has now adopted this new technology based upon operational improved efficiency and significant cost reduction on operating expense.