

# Reprocessing Cervical Cytology Samples, Previously Deemed Unsatisfactory, Due To Lubricant Interference. New Technology Shows Real Potential.

Ryan Fortna, MD, PhD, and Richard Ormesher, CT (ASCP), NorthWest Pathology, Bellingham, WA

## Introduction

Lubricant interference can effect results when processing cytology samples with a filter-type LBC system. We selected 127 patient samples, that were classified as 'unsatisfactory' after initial processing attempts with our Hologic ThinPrep2000. The resultant slides were hypocellular or void of cells, due to lubricant clogging the filter, or obscuring cells of interest on the slide. These samples were subsequently reprocessed, without additional treatment, using the CellSolutions F50 System, for evaluation.

## Materials and Methods

127 cervical cytology samples from multiple clinical sites, preserved in PreservCyt, were classified as unsatisfactory when processed with the Hologic ThinPrep2000 on ThinPrep slides. The selected samples did not contain significant amounts of blood, mucus, atrophic or inflammatory cells.

CellSolutions F50 and charged slides were used for subsequent processing. The Dual Filter design of the F50 System employs a 90 micron mesh filter that removes much of the lubricant but allows cells to pass

THINPREP DX	UNSAT	NEG	ASC-US	LSIL	
<b>F50 DIAGNOSIS</b>	----- CORRELATION -----				<b>TOTAL</b>
UNSAT	21				21
NEGATIVE	89	6			95
ASC-US	6	1	1		8
LSIL			1	1	2
ASC-H	1				1
HSIL					0
AGC					0
AIS					0
SQ CA					0
ADENOCA					0
	117	7	2	1	127

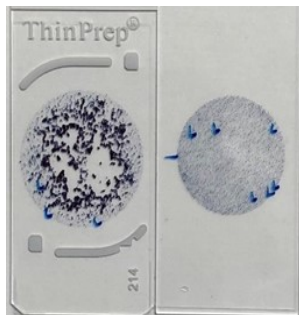
through to be deposited on a 5 micron membrane. The 20mm cell monolayer is then transferred on to a charged slide.

## Results

There was an 83% success rate for satisfactory cytology with samples that were reprocessed using the F50 System, without additional treatment. 53% of the unsatisfactory slides were also reprocessed with the TP2000 System with no improvement. The cost per specimen for the F50 processing was approximately \$4, comparing favorably to the ~9 per slide cost of TP2000 processing. Results were reported as 'High lubricant content, alternate processing method used'.

## Conclusion

The CellSolutions F50 System, with dual filter technology, should be considered for samples where lubricant material interferes with processing and/or interpretation using traditional TP2000 processing



Cell Solutions F50

richard.ormesher@nwlaboratory.com

CellSolutions Carlv@cellsols.com