

FOAMTEC INTERNATIONAL WCC VALUE ANALYSIS
VARIAN VIISTa 810 INDIUM SOURCE PM

VARIAN VIISTa 810 SOURCE CHAMBER PM	FOAMTEC INTL METHOD	STANDARD METHOD
REQUIRED PARTS	(2) Diamond Grit ScrubPADS @ \$25.40/pc (1) HT4754 UltraSOLV® Sponge @ \$4.87/pc (10) HT5790S MiraWIPE® @ \$0.70/pc = \$7.00 <u>TOTAL: \$62.67/PM</u>	(4) Pads of ScotchBrite @ \$1.20/pc = \$4.80 (150+) LTK Fab Wipes @ \$0.27/pc = \$40.50 <u>TOTAL: \$45.30</u>
REQUIRED CHEMICAL SOLVENT	IPA: 2oz (10) MiraWIPE with IPA NO H₂O₂ REQUIRED	IPA: 4oz (20) LTK Wipes soaked with IPA H ₂ O ₂ : 2.0oz (10) LTK Wipes soaked with H ₂ O ₂
HAZARDOUS WASTE	(2) ScrubPAD (1) UltraSOLV® Sponge (10) MiraWIPES® (13) TOTAL ITEMS	(4) ScotchBrite (150) LTK Wipers (154) TOTAL ITEMS
PM CLEAN TIME	Total Scrub Time – <u>1 Hr</u>	Total Scrub Time – <u>4 Hrs</u>
<u>ANALYSIS:</u> (10) VARIAN VIISTa 810 SOURCE CHAMBERS SOURCE PM EVERY 3 Wks (170) VARIAN VIISTa 810 SOURCE CHAMBER PM/YR	SOLVENT/YR: <ul style="list-style-type: none"> • IPA – 340oz • NO H₂O₂ REQUIRED WASTE: <ul style="list-style-type: none"> • 2,210 ITEMS <u>TOOL DOWNTIME – 170 Hrs</u>	SOLVENT/YR: <ul style="list-style-type: none"> • IPA – 680oz • H₂O₂ - 340oz WASTE: <ul style="list-style-type: none"> • 26,180 ITEMS <u>TOOL DOWNTIME – 680 Hrs</u>

FOAMTEC INTERNATIONAL WCCVALUE ANALYSIS EVALUATION
VARIAN VIISTA 810 INDIUM SOURCE PM

Vacuum Chamber: VARIAN VIISTA 810 Medium Current
Vacuum Chamber Process Residue: Process Induced Residue – IndiumSource
Vacuum Chamber Components: Source Chamber

OBJECTIVE:

To demonstrate how the Foamtec International PM Technique will provide the REDUCTION of chemical solvent, while cleaning the VARIAN VIISTA 810 Source chamber more effectively, and in less time - providing a SIGNIFICANT reduction in operating cost

OLD PROCEDURE

Products Used:

- (4) ScotchBrite® Scrub Pad
- (150) LTK Wipers
 - (10) Soaked with Hydrogen Peroxide
 - **NOTE: DUE TO SAFETY PRECAUTIONS, TECHNICIANS ARE REQUIRED TO WEAR BREATHING APARATUS WHEN PERFORMING ANY MAINTENANCE USING HYDROGEN PEROXIDE**
 - (20) Soaked with IPA
 - (75) Soaked with DI Water
 - (45) Used with DI Water to wipe deposition during scrub process

Clean Time: 4 Hrs

FOAMTEC INTERNATIONAL WCC UltraSOLV® CHAMBER CLEANING TECHNIQUE

Vacuum Chamber Products Used:

- (1) HT4528D 280 Diamond Grit ScrubPAD
- (1) HT4536D 360 Diamond Grit ScrubPAD
- (1) HT4754 UltraSOLV Sponge
- (10) HT5790S MiraWIPES®
 - (10) Soaked with IPA
 - **NOTE: NO HYDROGEN PEROXIDE REQUIRED**

Clean Time: 1 Hr

FOAMTEC INTERNATIONAL WCC ULTRASOLV® CHAMBER CLEANING TECHNIQUE

SEQUENCE OF EVENTS:

- Step 1:** Prep Varian Source Chamber for PM.
- Step 2:** Soak UltraSOLV® Sponge with DI water and wipe out entire source chamber. Rinse out sponge with DI water as necessary and continue to wipe out the source chamber until all loose Indium by-product has been removed.
- Step 3:** Use 360D Grit Diamond ScrubPAD with DI water and scrub source chamber, removing remaining deposition from chamber walls.
- Step 4:** [Unload Diamond ScrubPAD](#) onto UltraSOLV® Sponge as ScrubPAD begins to load up with deposition. Repeat as necessary.
- Step 5:** Continue to reuse UltraSOLV® Sponge with DI water to wipe out source chamber as necessary.
- Step 6:** Repeat steps 3 – 5 until all deposition is removed from entire chamber.
- Step 7:** Apply a small amount of IPA to MiraWIPES® and wipe out the entire source chamber, removing any moisture and remaining particles.

NOTE: STEP 7 IS A VERY CRITICAL STEP TO ENSURE LAM 2300 METAL ETCH CHAMBER RECOVERS FROM PM IN THE MOST EFFICIENT MANNER, MINIMIZING PUMPDOWN TIME AND REDUCING PARTICLES.