

Optics Kit Overview

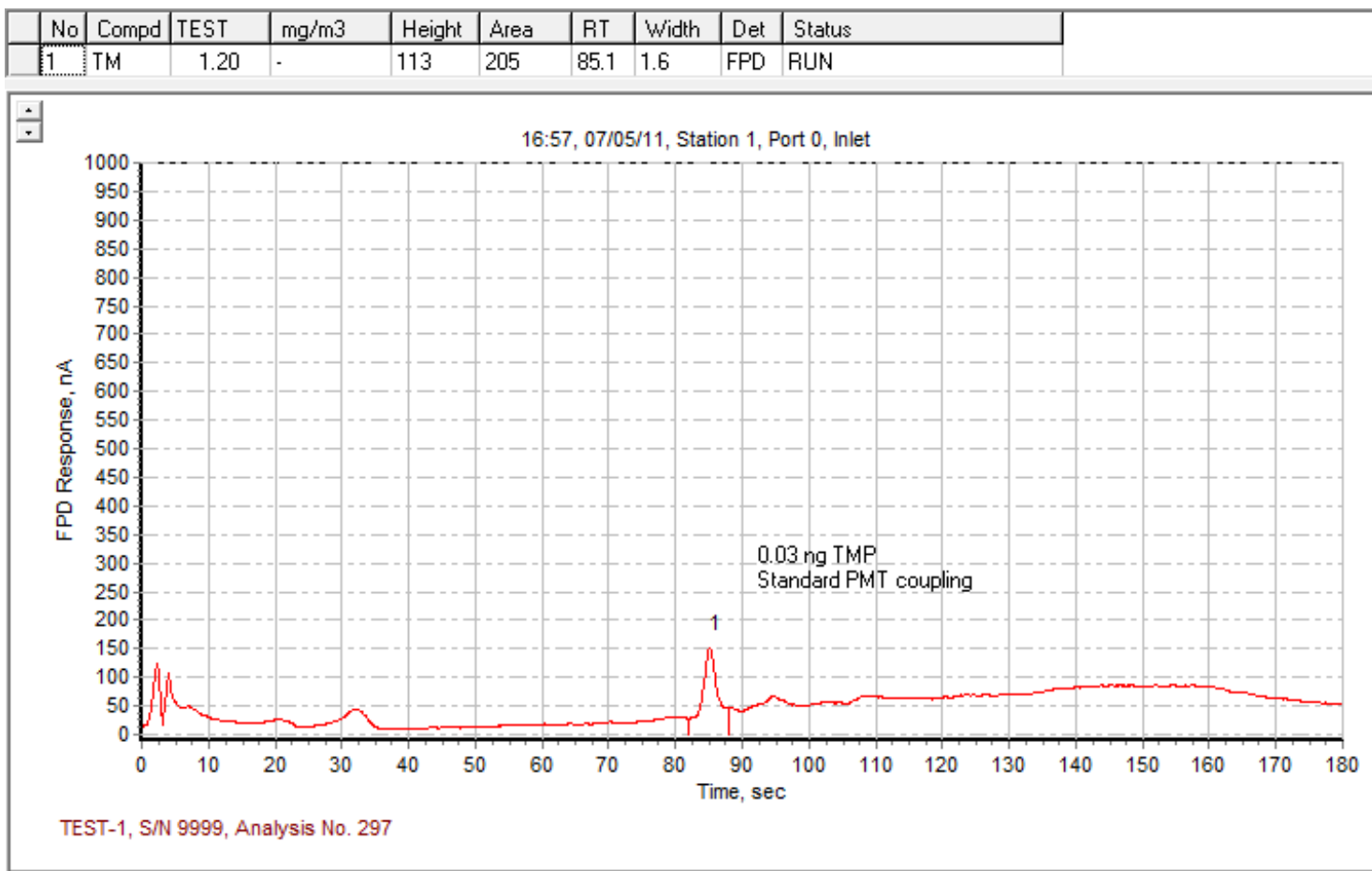
- New coupling between the detector block and MINICAMS[®] PMT
- A series of focusing lenses mounted inside a specially machined PMT coupling
- A concave mirror mounted on the back of the detector block



Optics Kit Operation

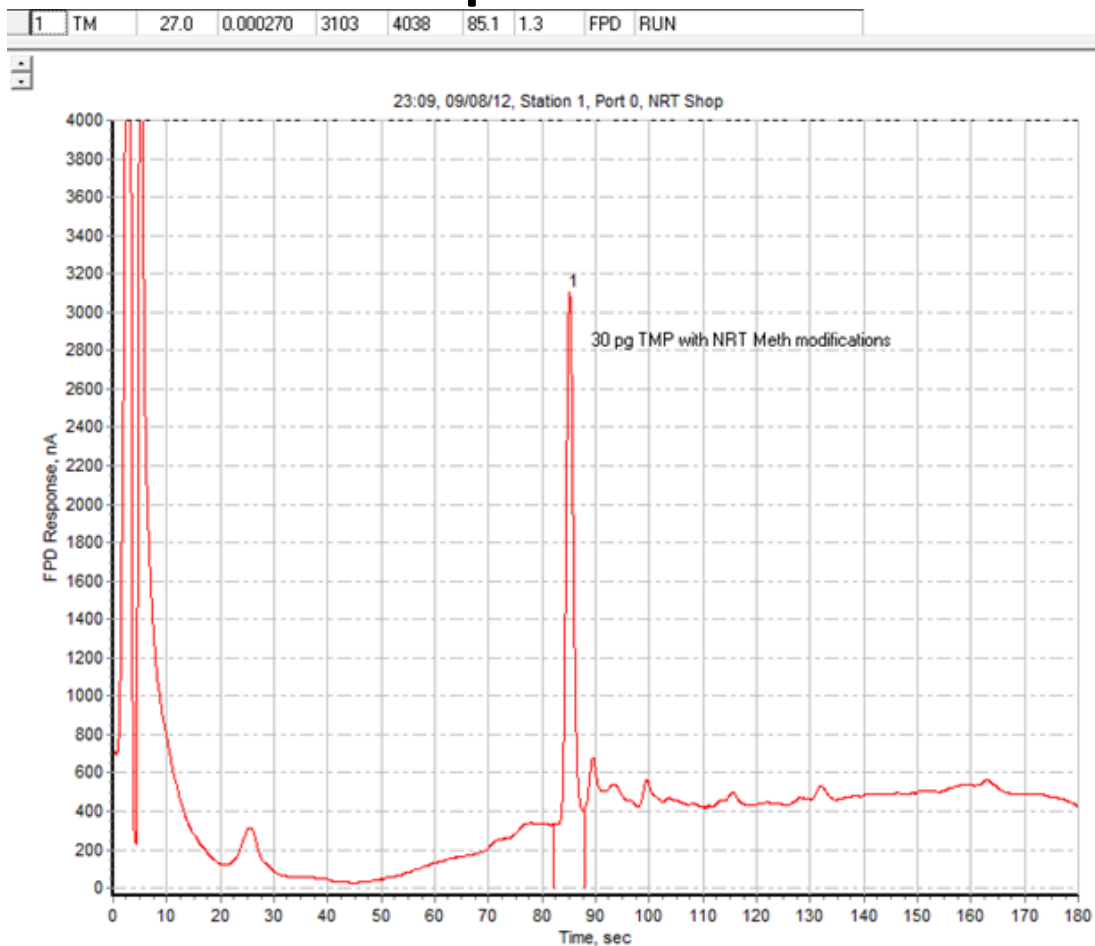
- To the analyst, operations of the modified MINICAMS[®] are completely transparent
- Determine proper PMT voltage set point for analyte concentration, typically lower
- The increased sensitivity will allow for fast cycle times

Standard MINICAMS[®]



CAMSCO 60/80 Haysep-D – 30pg on column, PMT @ 900

Optics Kit



CAMSCO 60/80 Haysep-D – 30pg on column, PMT @ 900

Optics Kit Performance

Coupling	Signal	Noise	S/N	Improvement Factor
Standard (no lenses)	113	4	28	0
NRT Optics	3246	4	811.5	28.98

Detection Capabilities

Airborne Exposure Limits in mg/m ³			
AGENT	STEL	WPL	GPL
GA	0.0001	0.00003	0.000001
GB	0.0001	0.00003	0.000001
GD	0.00005	0.00003	0.000001
GF	0.00005	0.00003	0.000001
VX	0.00001	0.000001	0.0000006

Analytical Speed

- This improved sensitivity will allow for much faster cycle times
 - VX STEL in ≤ 5 minutes at lower PMT voltage
 - G's WPL in ≤ 5 minutes at lower PMT voltage
 - VX WPL in ≤ 10 minutes
 - G's GPL in ≤ 8 minutes
 - VX GPL in ≤ 12 minutes
 - P&A on-site

Optics Kit 140 Second Cycle Time

- NRT Methodologies developed a 140 second method for a customer able to quantitate TEP as low as 0.00005 mg/m³ from as far away as 100'
 - Innovative sample lines were developed by Aerico and NRT
 - A customer has made this method the new standard by which data is collected for field testing

140 Second Cycle

Approx. 25pg Recovered Through 100' Line During a Field Trial

1	TE	0.92	0.0000461	113	232	49.9	1.6	FPD	RUN
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18:30, 04/19/12, Station 5, Port 0, 100 ft West

