

Vent Measurements: APRIL 27rd 2016

Mass Emission is calculated from Ideal Gas Law

mass emission mg/min = ppm x flow rate x molecular weight x P /RT

$n = PV/RT$

V = measured flow rate (m3/min)	0.00
P = 101325 Pa (760 mm Mercury)	101325
T = 293 K	293
R = molar gas constant 8.314 (m3Pa/mol K)	8.314
Molecular weight for solvent = 90	90
R x T	2436.002
P/RxT	41.595

		Solvent Tank to Mixer	Homogenisation Tank to Tank	Mixer to Buk Tank
		ST2-SLC2	BT5-BT2	SLC2-BT1
Mean ppm	ppm	3.78	13.01	0.45
Flow Volume	m3/min	2.77	2.77	2.77
Emission rate	gm/min	0.03921	0.13500	0.00463
Emission Rate MR	kg/min	0.00004	0.00014	0.00000
Prebalanced Rate (PBR)	kg/min	0.18000	0.18000	0.04400
MR/PBR		0.00022	0.00075	0.00011
Efficiency 1-MR/PBR		0.99978	0.99925	0.99989
EFFICIENCY PERCENT	%	99.978	99.925	99.989