

Vent Measurements: APRIL 9th 2014

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)	
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
		ST1 toSLC1	BT5 to BT4	SLC2 to BT1
Mean ppm	ppm	0.00	0.00	334.14
Flow Volume	m3/min	4.15	4.15	4.15
Emission rate	gm/min	0.00000	0.00000	5.18788
Emission Rate MR	kg/min	0.00000	0.00000	0.00519
Prebalanced Rate (PBR)	kg/min	0.18000	0.18000	0.04400
MR/PBR		0.00000	0.00000	0.11791
Efficiency 1-MR/PBR		1.00000	1.00000	0.88209
EFFICIENCY PERCENT	%	100.000	100.000	88.209

CALIBRATION CERTIFICATE

CUSTOMER: DAREX UK LTD CERT NO: 43140/041113

MANUFACTURER: Telegan SHEET: 1 OF 1

MODEL/TYPE: Autofim 2

SERIAL NUMBER: 5211 TAG No: 43140

RANGE/UNITS: 0 to 10000 ppm ACCURACY: See Results

LOCATION: Insteng Process Automation

Ref	
Test Gas	Autofim 2
0	0 ppm
LEL Methane (5000ppm)	4980 ppm

REF. INST: Test gas 5000ppm Methane in air cylinder no: 005119

Valid to 10th Dec 2015

COMMENTS: Zero test in fresh air

PERFORMED: B. Harrison SIGN: [Signature] TEMP: 20 ±2°C

AUTHORISED: R. Hester SIGN: [Signature] POSN: QA Co'dr

Form No: W.01 DATE: 04.11.13 DUE: 04.05.14



Cert.No. 7159

This logo demonstrates that the organisation has a Management System to assure compliance to the system standard.

Unit 3, Moy Road Industrial Estate, Taffs Well, Cardiff. CF15 7QR.
Tel Cardiff (029) 2081 5000 Fax: (029) 2081 3051 E-mail: service@insteng.co.uk

Vent Measurements: OCT 22nd 2014

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)	
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
		ST1-SLC3	BT3-BT2	SLC1-BT3
Mean ppm	ppm	0.00	0.00	3.43
Flow Volume	m3/min	3.07	2.83	1.70
Emission rate	gm/min	0.00000	0.00000	0.02176
Emission Rate MR	kg/min	0.00000	0.00000	0.00002
Prebalanced Rate (PBR)	kg/min	0.18000	0.18000	0.04400
MR/PBR		0.00000	0.00000	0.00049
Efficiency 1-MR/PBR		1.00000	1.00000	0.99951
EFFICIENCY PERCENT	%	100.000	100.000	99.951

Part D

Solvent/Product Analysis: 2014 (Base Data for VOC Calculation)

Solvent Analysis

Solvent	Op. Bal.	Receipts	Cl. Bal.	Usage		
ACETONE	1690	4994	1035	5649		
ISOPROPANOL	2102	19540	1574	20068	20332	
N-PROPANOL	13	330	79	264		
HEPTANES	0	4021	147	3874		
HEXANES	6871	43440	0	50311	1797709	898855
CYCLOHEXANE	2	0	0	2		
HYDROCARBON	22118	1744750	19472	1747396		
ETHANOL (IMS)	65	2370	237	2198		
TOTAL	32861	1819445	22544	1829762	1,186,384	39.33%

Production Analysis

Production Volume Jan - Dec 2014					
Product	Tanker	IBC	Drum	Poly	Total
SLC 100A	166,390	54,100	1,384,550	-	1,605,040
SLC 160	-	-	754,080	480	754,560
SLC 235	121,060	-	-	-	121,060
SLC 239G	-	-	8,170	-	8,170
SLC 9291ES	-	-	-	-	-
	-	-	-	-	0
SOLV 1E	-	-	8,040	192	8,232
SOLV 3	-	-	480	-	480
NDF 20/27T DF	-	-	31,442	810	32,252
SP 1427	142,730	159,000	150,176	988	452,894
DL	-	-	1,000	3,738	4,738
LF	-	-	-	-	-
NW	-	-	540	1,380	1,920
CSF	-	-	-	1,936	1,936
DREM	-	-	-	24,864	24,864
Total	430,180	213,100	2,338,478	34,388	3,016,146

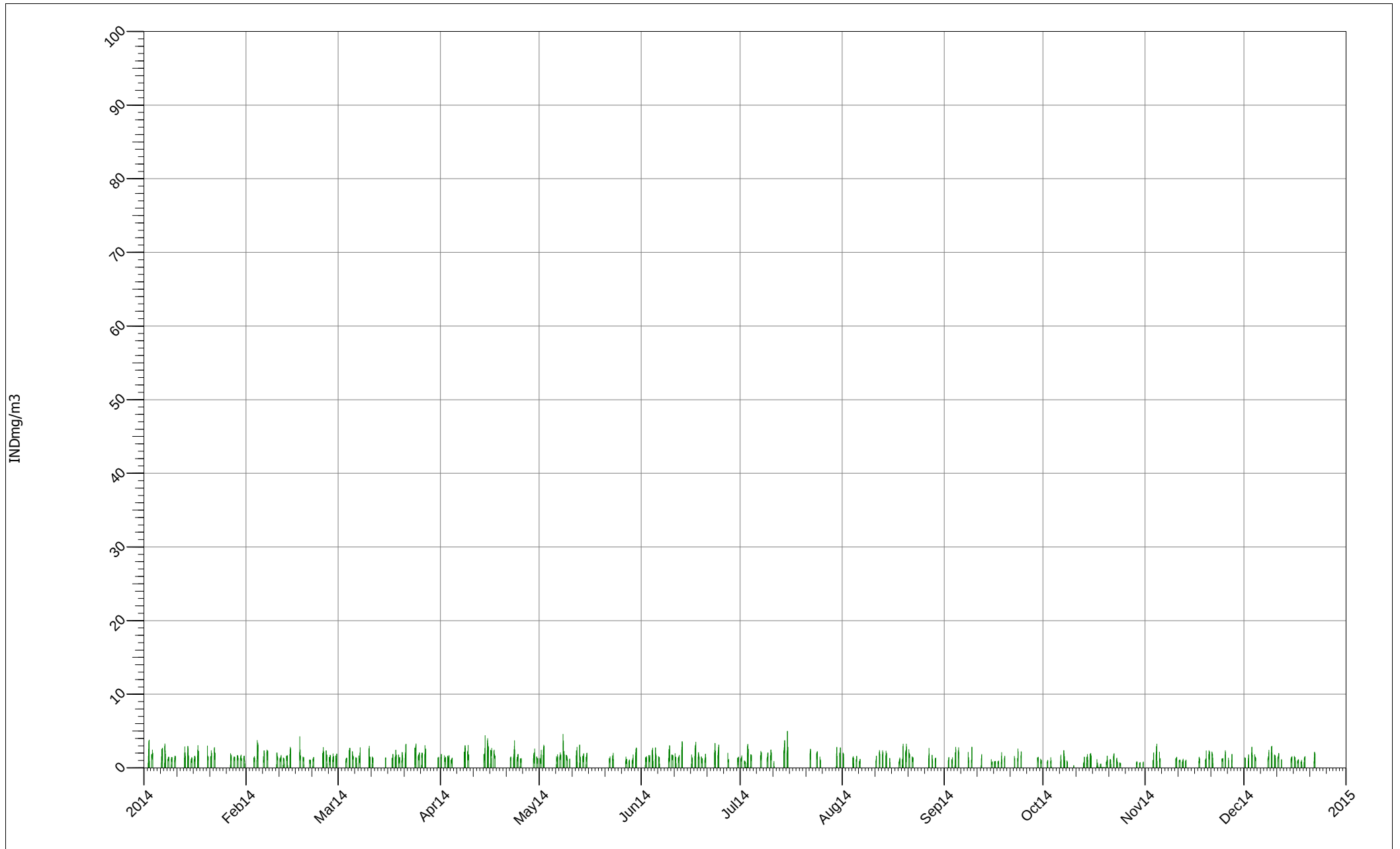
Emission Report

Company:DAREX UK LTD ContactGLENN DRAPER

CONVEYORS STACK 2

From:01 Jan 14 00:00:00 To:01 Jan 15 00:00:00

Device 1 : Stack1 Banbury Cal Factor: 0.11 (constant) Average:0.218 Averaging Period:15 mins Maximum:4.980



Emission Report

Company:DAREX UK LTD ContactGLENN DRAPER

CONVEYORS STACK 2

From:01 Jan 14 00:00:00 To:01 Jan 15 00:00:00

Device 1 : Stack2 Conveyor Cal Factor: WARNING CAL FACTOR IS NOT CONSTANT Average:0.130 Averaging Period:15 mins Maximum:4.760

