

IBR JN: 20714

Performed for: Under Guardian LLC

Date: 22 January, 2020

Location: Savage, MN

Contact: Mark Monson

Test Method: NFPA 1971:2018 Efficiency of barrier flat sheet media - Flowing
Description of Samples: Mark Monson Underwear Proto #3 Size L - Conditioned with a single wash cycle prior to receipt

Sample Source: Mark Monson - Savage, MN

Date Samples Received: 14 January, 2020

Face Velocity: 1 cm/sec, 1.7 LPM

Flow Direction: Outside of garment facing challenge

Conditions: Temperature 20.4C, Relative Humidity 52.7%, Barometric Pressure 741.8mmHg

Contaminant: Latex Sphere Aerosol, polydispersed (Neutralized)

IBR ID	Layers	Label on Sample	Differential Pressure (inH ₂ O)	Port	Particles at: (in micron)							
					0.10	0.16	0.30	0.50	0.60	0.70	0.81	1.00
20714-1A	1	Mark Monson Underwear Proto #3 Size L	0.04	Upstream	412349	352454	223367	134319	113196	107293	95227	85698
				Downstream	7626	8685	3892	1205	829	669	505	389
				Efficiency (%)	98.15	97.54	98.26	99.10	99.27	99.38	99.47	99.55
20714-1B	1	Mark Monson Underwear Proto #3 Size L	0.05	Upstream	428009	366471	227615	140089	119640	110522	96280	88316
				Downstream	8821	10077	4396	1992	1001	844	620	477
				Efficiency (%)	97.94	97.25	98.07	98.58	99.16	99.24	99.36	99.46
20714-1C	1	Mark Monson Underwear Proto #3 Size L	0.05	Upstream	417754	352861	229427	139533	120663	103694	95414	84511
				Downstream	12034	13536	8279	3158	2273	1506	1015	663
				Efficiency (%)	97.12	96.16	96.39	97.74	98.12	98.55	98.94	99.22

Note: Samples cut from a single sample such that no seams were present within the tested area.

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.


Performed By: DN

Data Location: DN247

Manufacturer	Model Number	Serial Number	IBR ID	Range of Use	Cal Due
Alicat	M-50SLPM-D/5M	89682	AF-96	0.4-5 slpm	7/5/2020
Dwyer	DHII-007	Date Code: A31X	MAN-31	0.1-9.0 inH ₂ O	2/12/2020
Dwyer	475-000	none	MAN-33	0.1-1.0 inH ₂ O	5/9/2020
Vaisala	HMT330	L5220038	RH-206	12-75%RH/16-27C	1/9/2021
Vaisala	PTU300	R3240750	RH-209	500-1100 hPa	8/9/2020
TSI	3080	70902080	N/A	10-1000nm	6/30/2020
TSI	3772	709077300	N/A	10 ⁴ particles/cc	6/30/2020
TSI	3080	71133078	N/A	10-1000nm	3/19/2020
TSI	3772	3772132401	N/A	10 ⁴ particles/cc	3/19/2020



Revision	Editorial or Technical	Description	Approved by	Release Date
		Initial release	DRM	1/22/2020

 Reviewed By: 
 Daniel R. Miller, Air Labs Manager