

# CAPILLARY FLOW ANALYSIS

10-08-2004

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Operator: MD  
Lot Number: 9274  
Hardware Serial Number: 07092004-1328  
Type of test: Dry Up/Wet Up  
Wet Parameter: C:\PROGRAM FILES\CAPWINALBERTA\USERS\PROTEC\SOM\DEFAULT.L  
Dry Parameter: C:\PROGRAM FILES\CAPWINALBERTA\USERS\PROTEC\SOM\DEFAULT.L  
Lohm Table: lohmtable.cal  
Tortuosity Factor: .715

FLUID = GALWICK  
SURFACE TENSION = 15.6 DYNES/CM

File = LOT9274\_DUWU\_PROTEC\_SOM\_001CT.CFT

SAMPLE ID = PROTEC\SOM (100% COTTON)

MEAN FLOW PORE PRESSURE = 1.067 PSI  
MEAN FLOW PORE DIAMETER = 6.0683 MICRONS  
BUBBLE POINT PRESSURE = 0.252 PSI  
BUBBLE POINT PORE DIAMETER = 25.6559 MICRONS

Filter flow% = 100 \* WET FLOW / DRY FLOW  
INCR FF% = Filter flow%(current) - Filter flow%(previous)  
PORE DISTRIBUTION = INCR FF% / (DIAMETER(previous)-DIAMETER(current))

## DIFFERENTIAL PRESSURE

PRESSURE PSI	DIAMETER MICRONS	WET FLOW L/MIN	DRY FLOW L/MIN	INCR FF%	FILTER FLOW%	PORE DIST	AVERAGE DIAMETER
0.2523	25.6559	0.00068	5.885	0.011	0.011		
0.3561	18.1793	0.57514	8.361	6.867	6.879	0.9185	21.9176
0.5257	12.3148	2.59194	12.222	14.328	21.207	2.4431	15.2470
0.8202	7.8930	7.29240	18.635	17.926	39.132	4.0540	10.1039
1.2753	5.0764	15.72907	27.920	17.204	56.337	6.1081	6.4847
1.5937	4.0622	22.01001	34.119	8.173	64.509	8.0583	4.5693
1.9515	3.3174	29.24243	40.841	7.091	71.601	9.5220	3.6898
2.4046	2.6923	38.46116	49.181	6.602	78.203	10.5606	3.0049
2.5968	2.4930	42.46751	52.690	2.397	80.599	12.0273	2.5927
2.9405	2.2017	49.99531	58.789	4.442	85.042	15.2468	2.3474

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3.2587	1.9867	57.27935	64.258	4.098	89.140	19.0631	2.0942
3.5543	1.8215	63.79945	69.341	2.869	92.009	17.3627	1.9041
3.7933	1.7067	68.64472	73.431	1.473	93.482	12.8372	1.7641
4.1031	1.5778	74.42690	78.307	1.563	95.045	12.1322	1.6423
4.3770	1.4791	79.20963	82.694	0.742	95.787	7.5095	1.5285
4.7578	1.3607	85.53271	89.026	0.289	96.076	2.4449	1.4199
5.0787	1.2747	90.75739	93.962	0.513	96.589	5.9678	1.3177
5.4489	1.1381	96.73193	99.489	0.639	97.229	7.3810	1.2314
5.6141	1.1532	99.35248	101.929	0.243	97.472	6.9626	1.1706
5.7895	1.1182	102.09261	104.523	0.203	97.675	5.8144	1.1357
6.3303	1.0227	110.32240	112.514	0.377	98.052	3.9425	1.0705
6.9468	0.9319	119.43861	121.559	0.204	98.256	2.2486	0.9773
8.7787	0.7375	145.60530	147.695	0.329	98.585	1.6926	0.8347
10.6602	0.6073	171.48091	173.376	0.322	98.907	2.4754	0.6724
12.5086	0.5176	195.99872	198.059	0.052	98.960	0.5827	0.5624
13.4693	0.4807	208.12331	210.762	0.000	98.960	0.0000	0.4991

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## SUMMARY SHEET

SAMPLE ID = PROTEC'SOM (100% COTTON)

LOT NUMBER = 9274

TORTUOSITY = 0.715

SMALLEST DETECTED PORE DIAMETER (AT 98.05% CFF) = 1.0227 MICRONS

MEAN FLOW PORE DIAMETER = 6.0683 MICRONS

LARGEST DETECTED PORE DIAMETER = 25.6559 MICRONS

STANDARD DEVIATION OF AVG. PORE DIAMETER = 6.2298

BUBBLE POINT PRESSURE = 0.252 PSI

BUBBLE POINT PORE DIAMETER = 25.6559 MICRONS

MAXIMUM PORE SIZE DISTRIBUTION = 19.0631

DIAMETER AT MAXIMUM PORE SIZE DISTRIBUTION = 1.9867 MICRONS

10% Cumulative Filter Flow occurs at 16.9018 microns

25% Cumulative Filter Flow occurs at 11.3791 microns

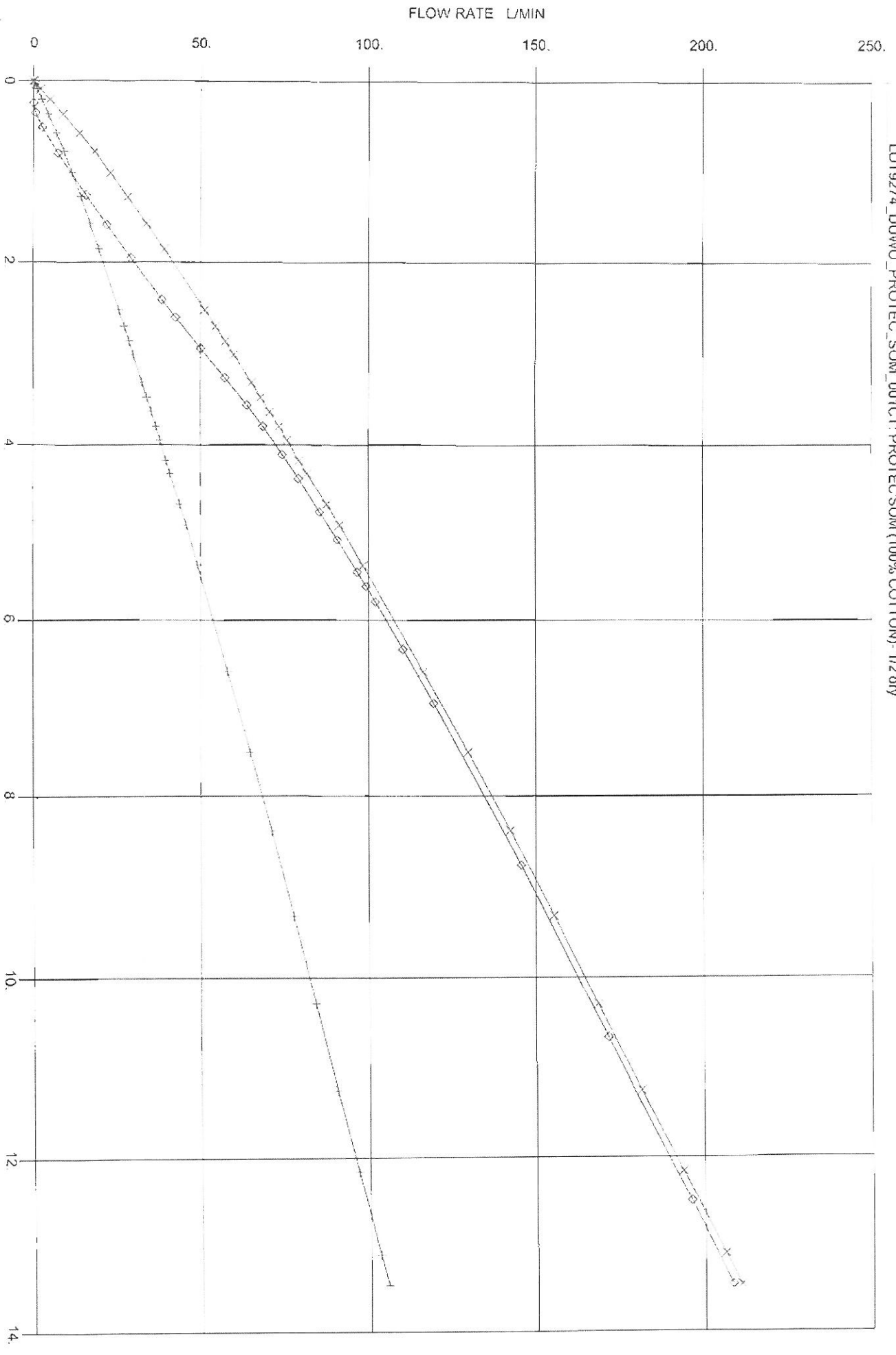
75% Cumulative Filter Flow occurs at 2.9956 microns

90% Cumulative Filter Flow occurs at 1.9371 microns

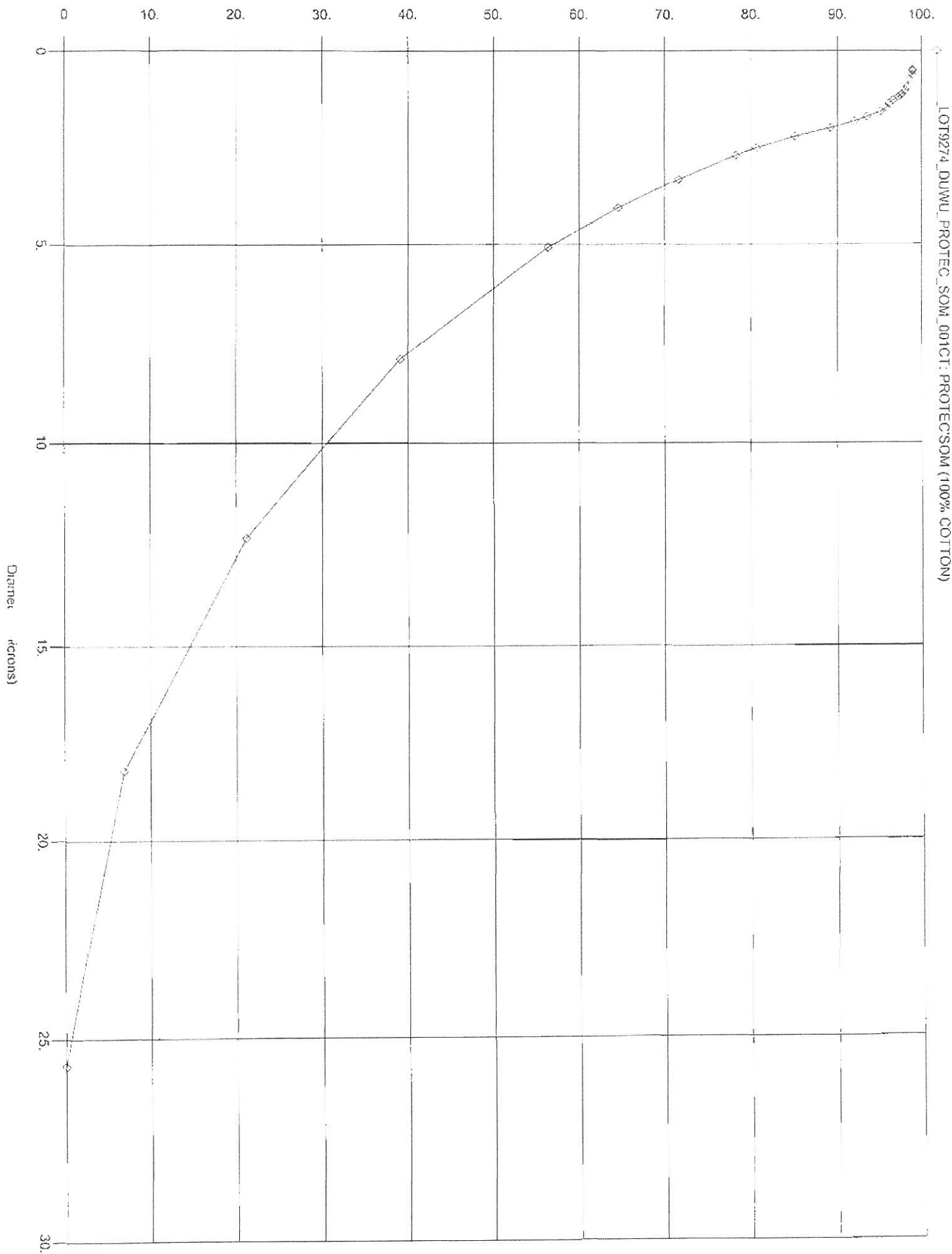
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FLOW RATE VS PRESSURE

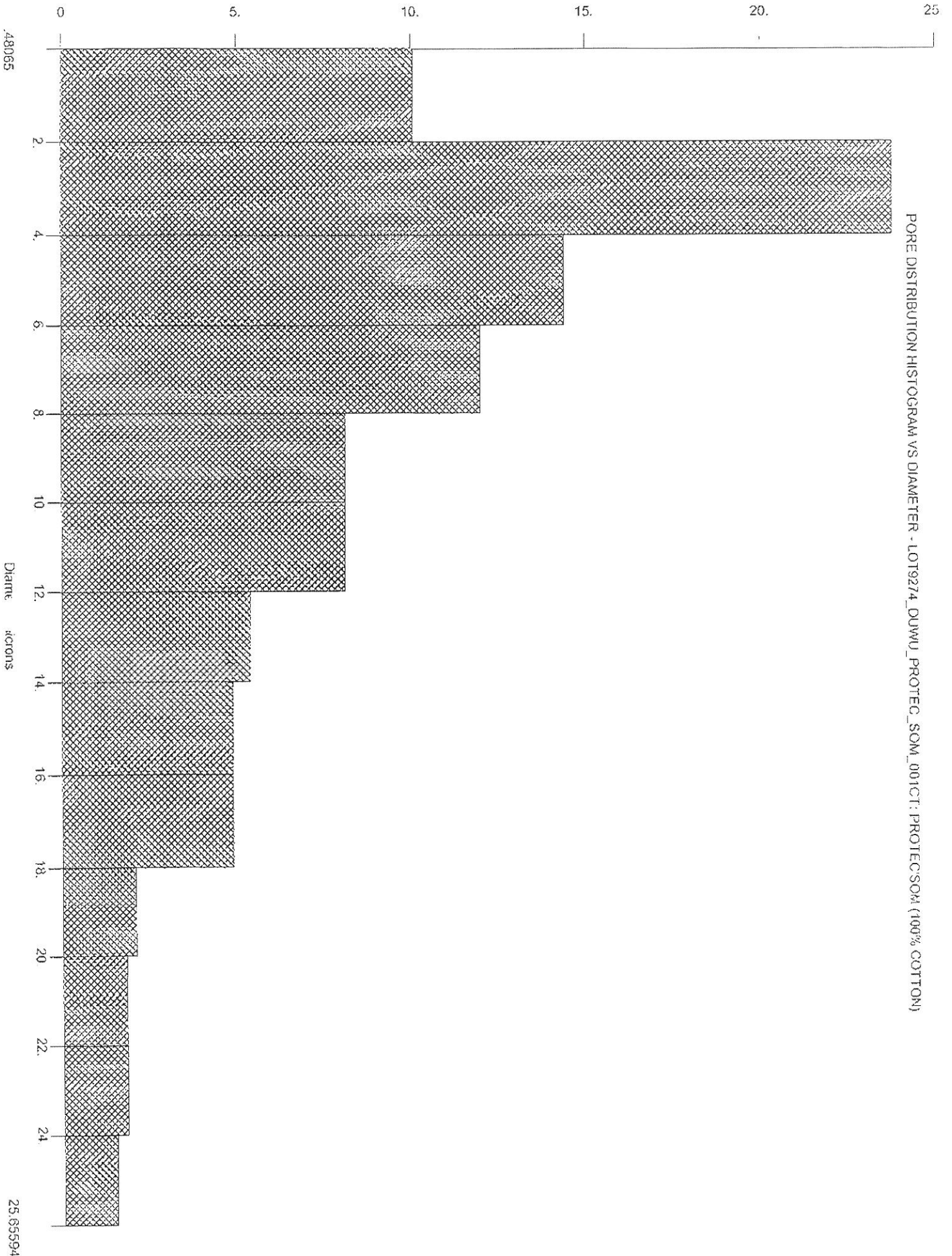
LOT19274\_DUWU\_PROTEC\_SOM\_001CT: PROTEC:SOM (100% COTTON)-:vel  
LOT19274\_DUWU\_PROTEC\_SOM\_001CT: PROTEC:SOM (100% COTTON)-:dry  
LOT19274\_DUWU\_PROTEC\_SOM\_001CT: PROTEC:SOM (100% COTTON)-:1/2 dry



CUMULATIVE FILTER FLOW



PORE SIZE DISTRIBUTION



.48065

Diameter  
microns

25.05594

PORE SIZE DISTRIBUTION

