

MICROFILTRATION - Technical Data

MPL 47 – DIFFUSIVE FLOW TEST - CHEMIFIL

Pre-Wetting:

It is imperative that the **Chemifil** cartridge is thoroughly wetted with a solution of 60% iso propyl alcohol (IPA) and 40% water before carrying out the diffusion test. To achieve thorough wetting follow pre-wetting procedure described in MLP16.

Note:

Diffusive Flow values reported here applies to filter cartridges wetted with 60% isopropyl alcohol (IPA) 40% water. It is also acceptable to use other compatible liquids (with a surface tension less than 28 dyne/cm). Although the test pressure must be corrected for the surface tension differences.

Procedure:

1. Wet 'O' rings with water and install **Chemifil** Cartridge in the housing.
2. Wet **Chemifil** cartridge as described in wetting procedure (refer to MLP 46).
3. With the wetted **Chemifil** Cartridge positioned in the housing, connect housing **inlet** to a regulated source of clean compressed air (or other test gas such as nitrogen), and connect housing **outlet** to a suitable piece of flexible tube, extending into a inverted calibrated burette over a water trough partially filled with water (see fig 1).

4. Open gas valve slowly so as to pressurise filter assembly to 200mbar, hold pressure for 30 seconds to allow excess test solution to drain.

5. Continue to increase the gas pressure slowly until the required test value is reached.

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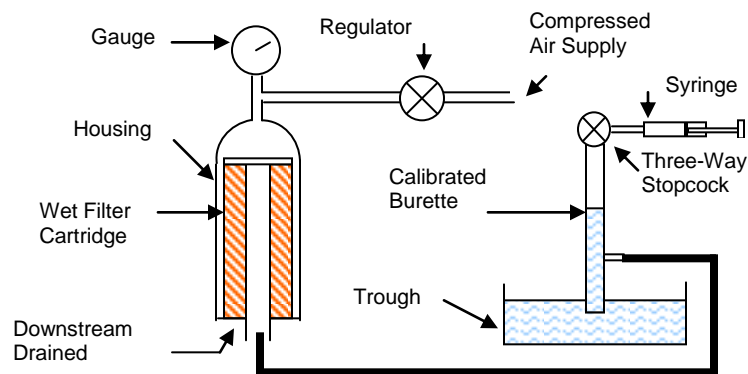


fig 1

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6. Measure flow rate (ml/min) of diffusing gas after flow has stabilised for 5 Minutes.
7. Maximum acceptable diffusive flow rates for 250mm (10") Ipa/water wetted **Chemifil** Cartridge are as follows:

PRODUCT CODE	PORE SIZE RATING	TEST PRESSURE		MAXIMUM DIFFUSION
		µm	mbar	
C10	0.1	1360	20	10
C20	0.2	600	9	10

8. Maximum Permissible Diffusion Values:

110mm (4")	Cartridge	-	4.4ml/min
125mm (5")	Cartridge	-	5.0ml/min
250mm (10")	Cartridge	-	10.0ml/min
500mm (20")	Cartridge	-	20.0ml/min
750mm (30")	Cartridge	-	30.0ml/min
1000mm (40")	Cartridge	-	40.0ml/min

Note:

Most integrity test failures are due to incomplete wetting of the filter cartridge rather than a defect in the filter membrane itself. Therefore, if a failure occurs, re-wet the cartridge and repeat test.

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