

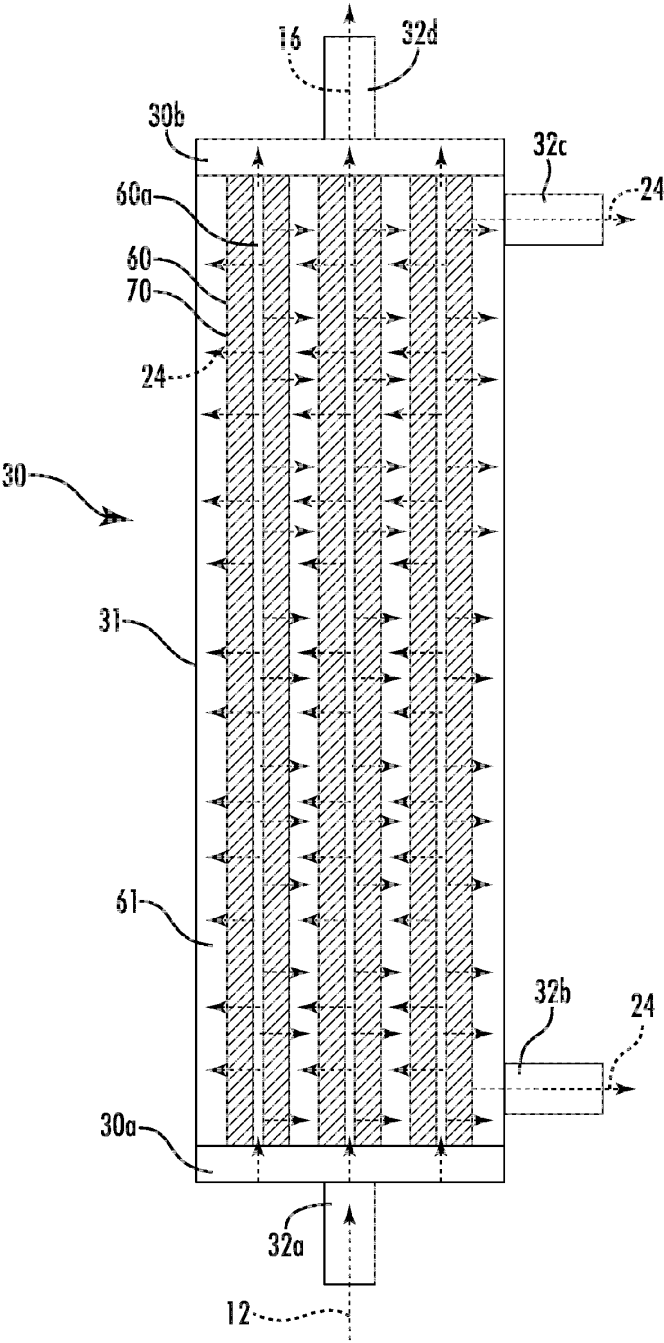


FIG. 1A

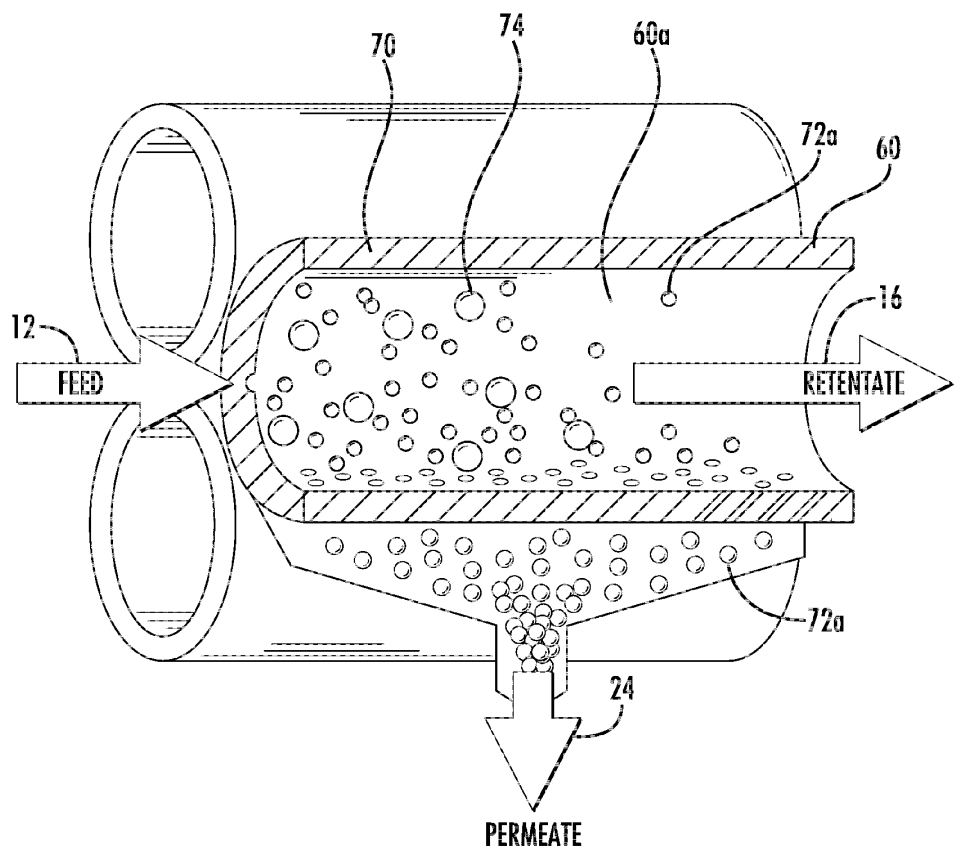
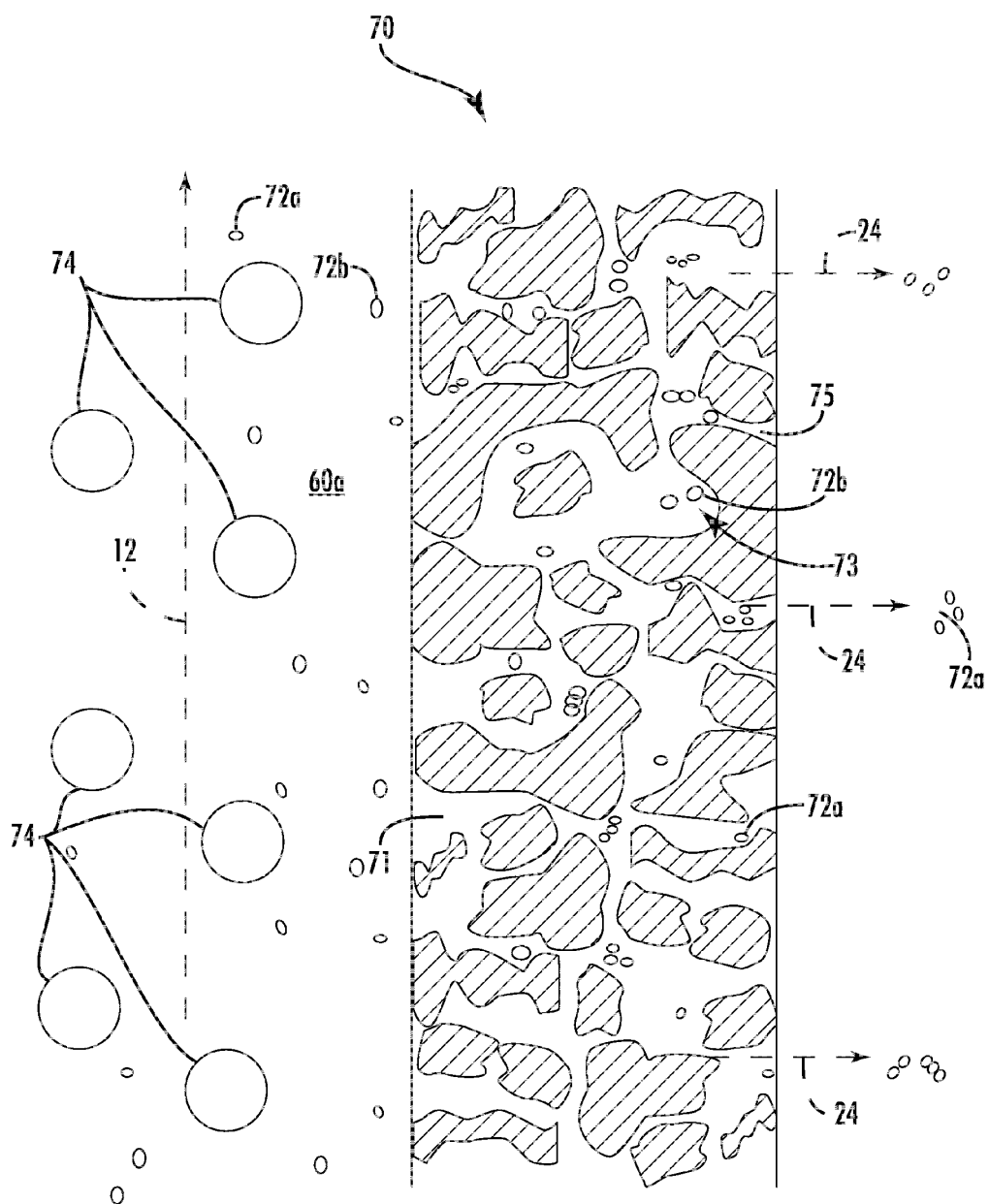
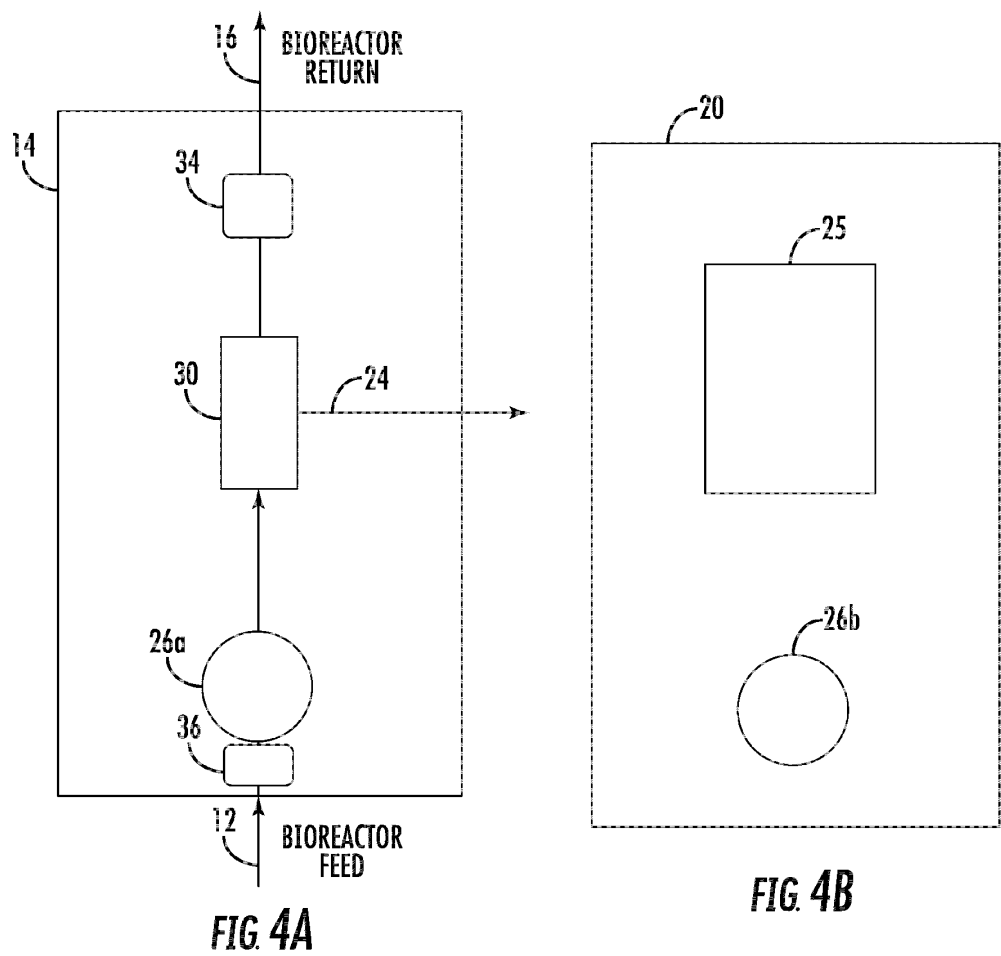
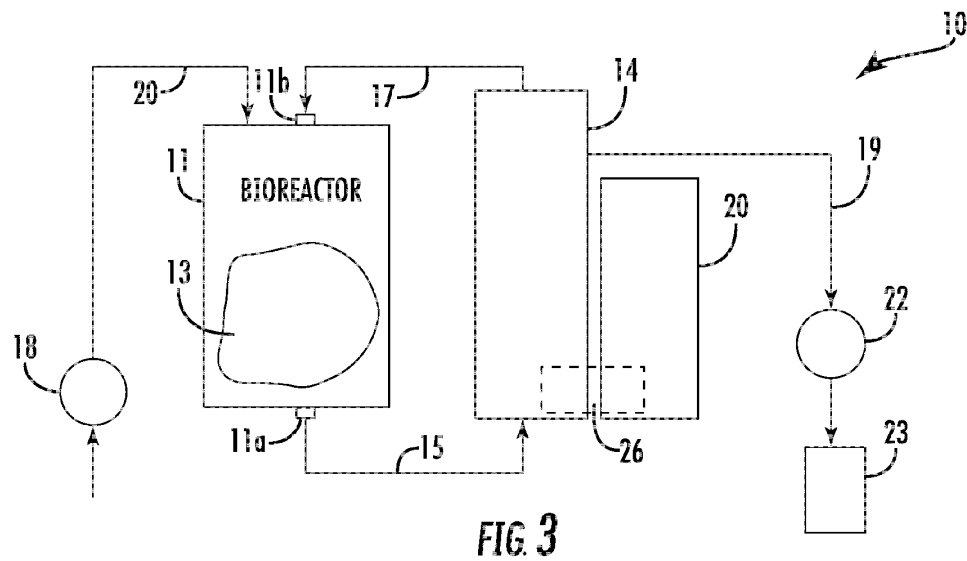


FIG. 1B

**FIG. 2**



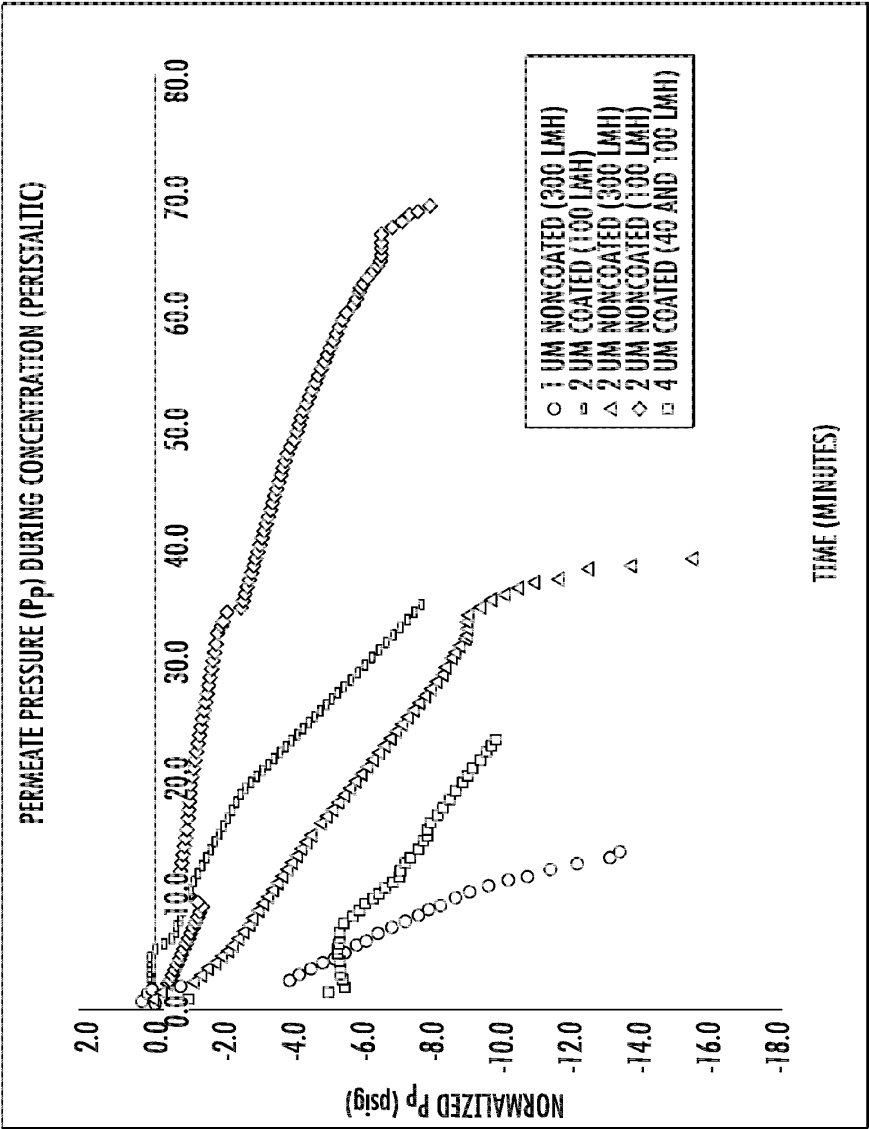


FIG. 5A

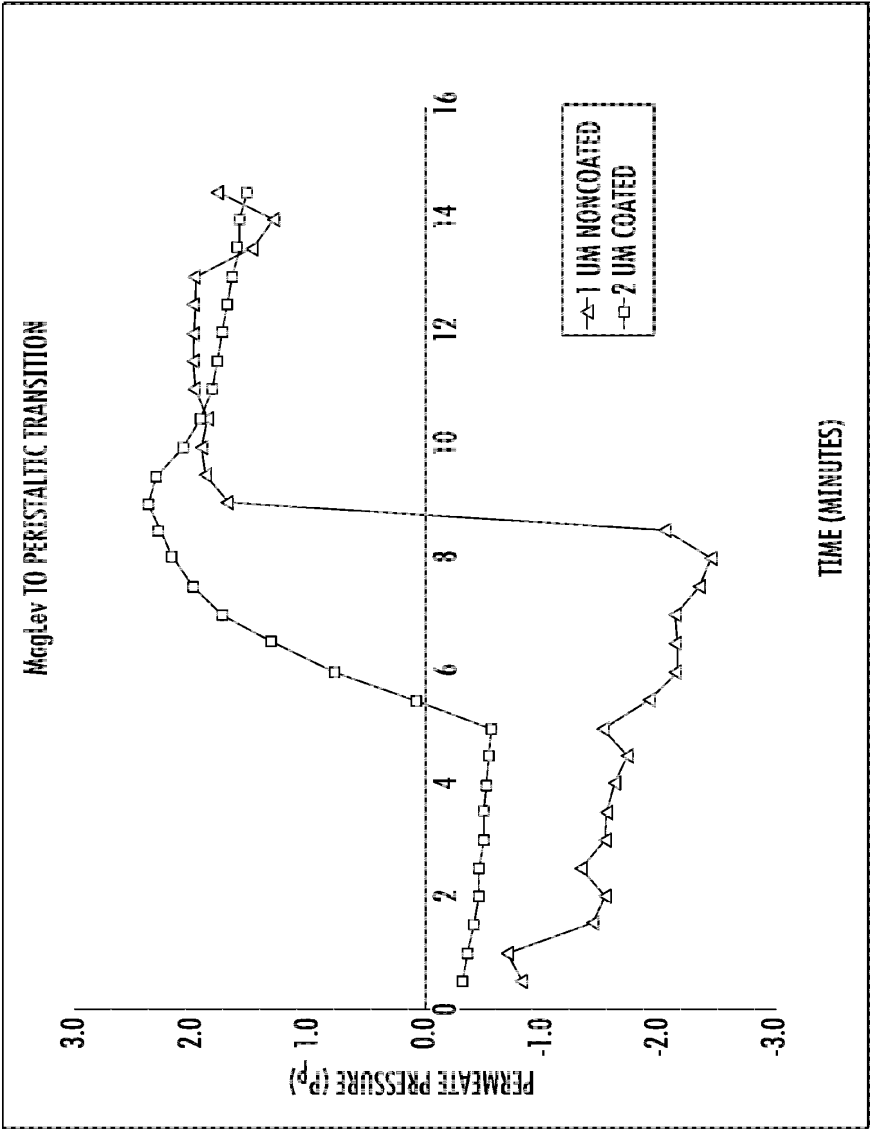


FIG 5B

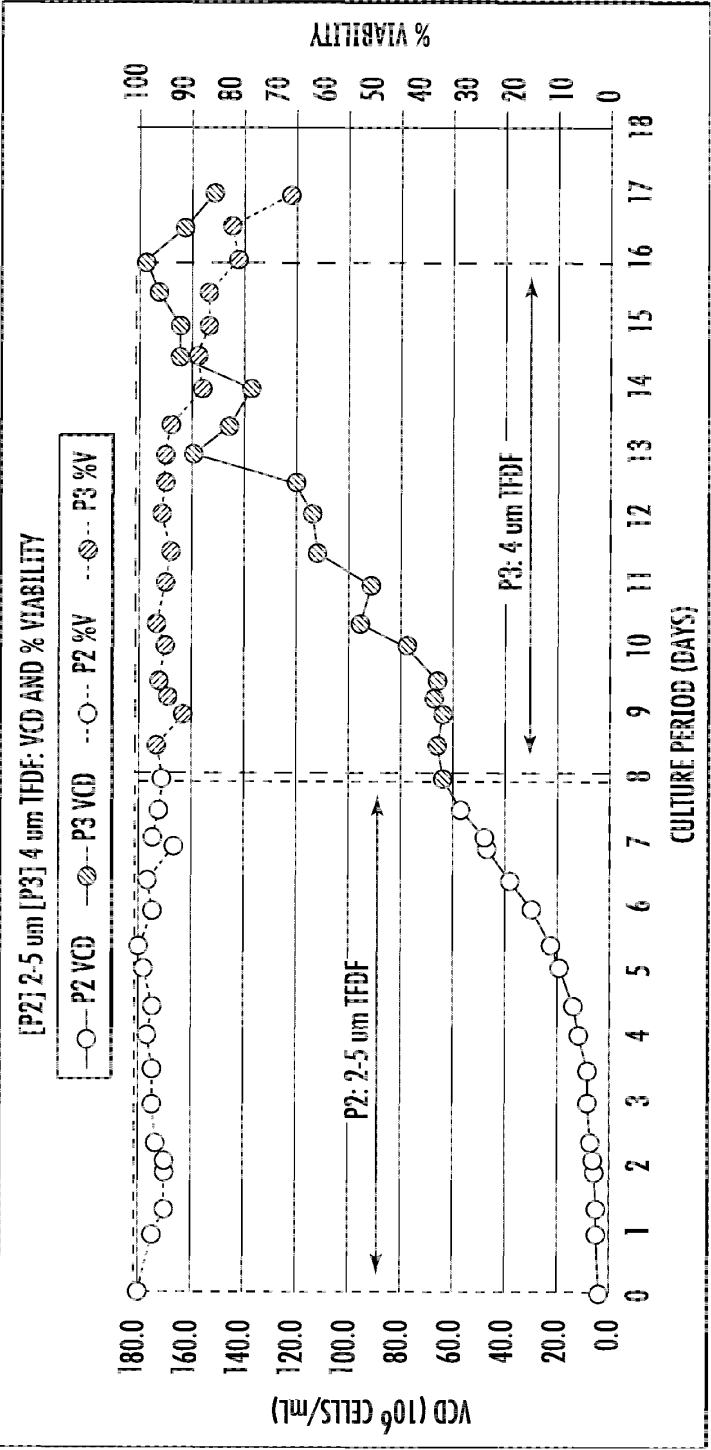


FIG. 6

CONDITIONS SUMMARY	
CONDITIONS	[P3]
RECIRCULATION RATE; SHEAR RATE	MANUAL MODE (1900-2000 rpm)
MEDIA FEED RATE	MANUAL MEDIA FEED (TIMER CONTROLLED CYCLES)
PERMEATE RATE	CONTINUOUS MANUAL PERMEATION (CONSTANT PERMEATE rpm TO MATCH VVD)
PERFUSION CULTURE PERIOD (DAYS)	9 (DAY 8-17)
FOULING EVENT	NONE EXPERIENCED
RUN END	PERMEATE LINE LEAK

DATA SUMMARY						
	PERFUSION CULTURE PERIOD (DAYS)	PEAK VCD (10 ⁶ CELLS/ML)	PEAK %CELLS PASSING	TURBIDITY RANGE		FLUX RANGE (LMH)
				RETENTATE	PERMEATE	
P3	9	175.0	4.79%	1720-6250	354-1139	24-39
				AVG %SIEVING 99.24 ± 14.85		AVG TMP ---

FIG. 7

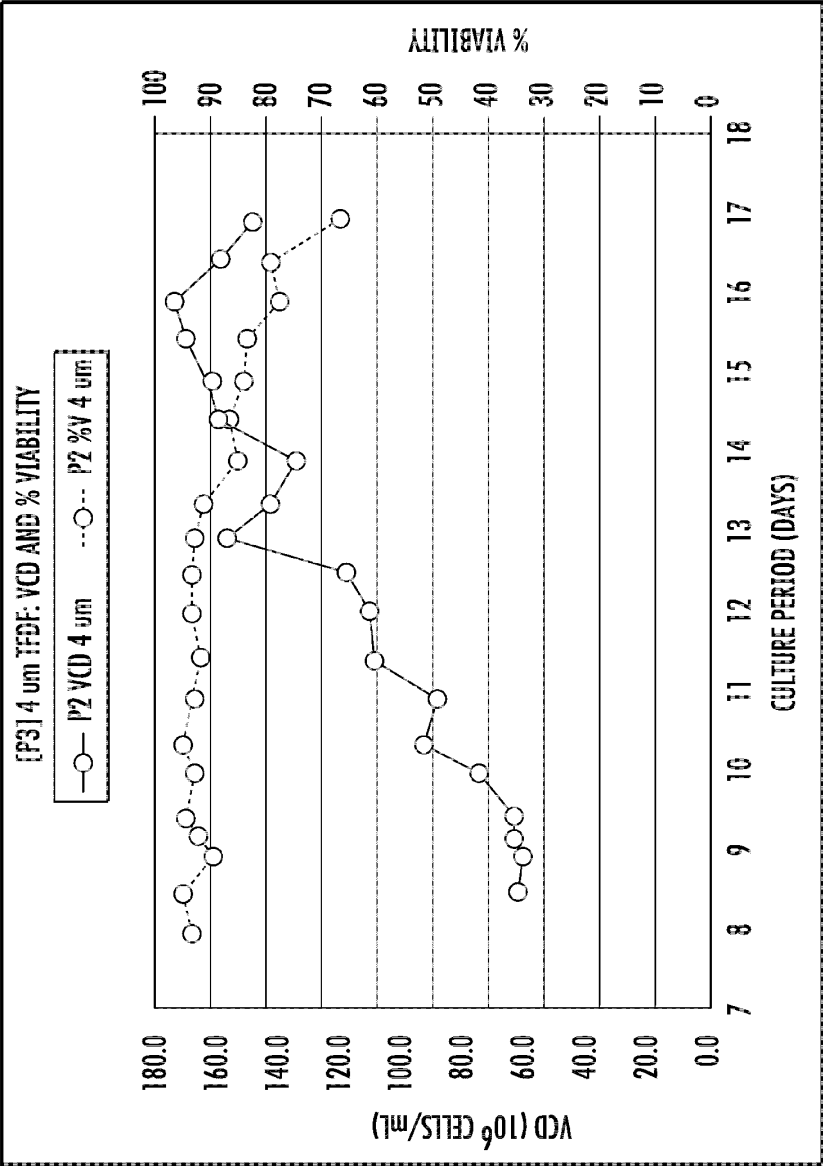


FIG 8

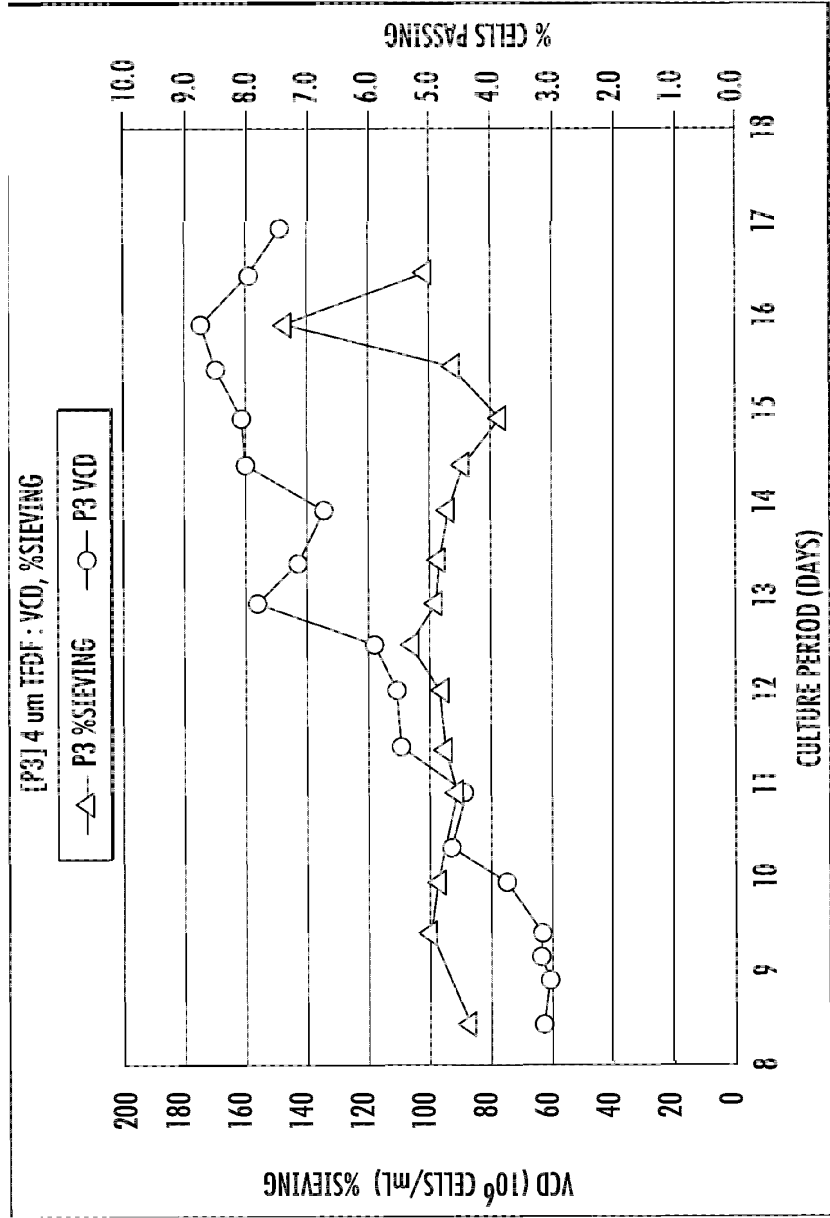


FIG. 9

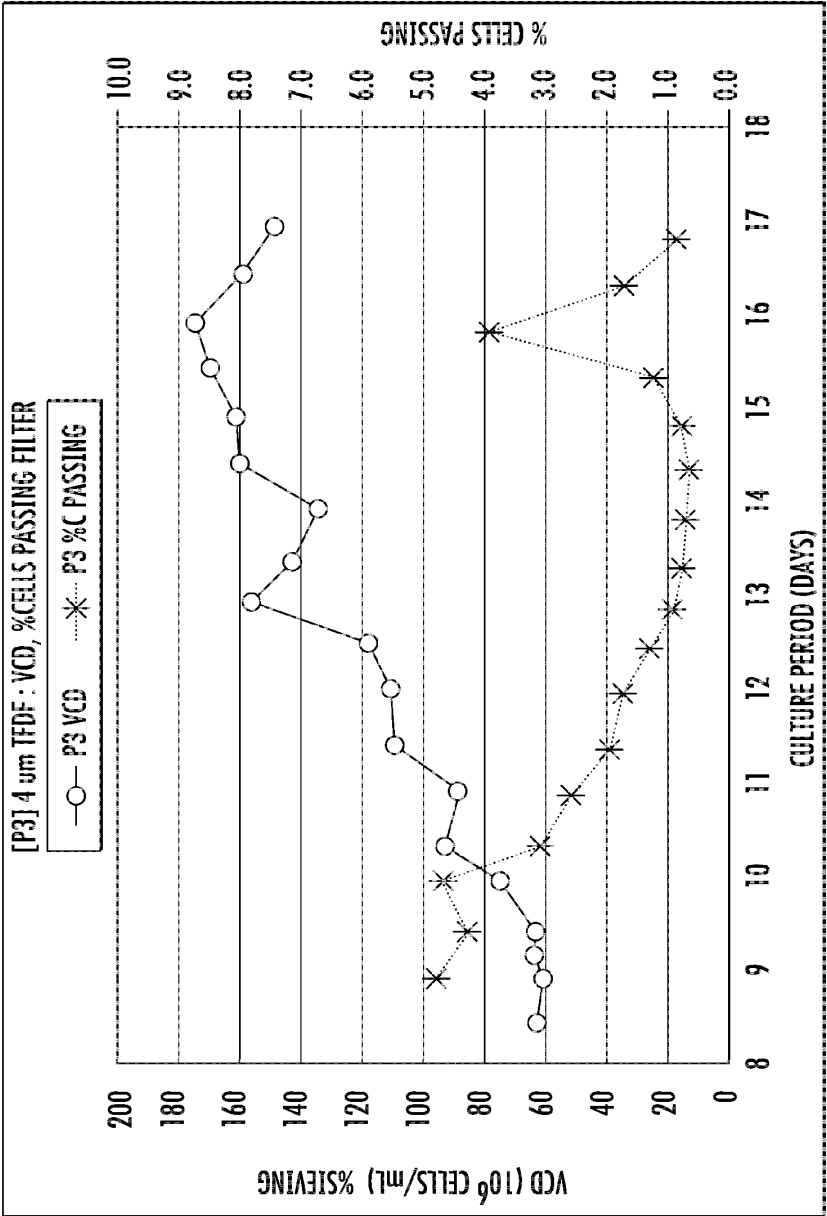


FIG. 10

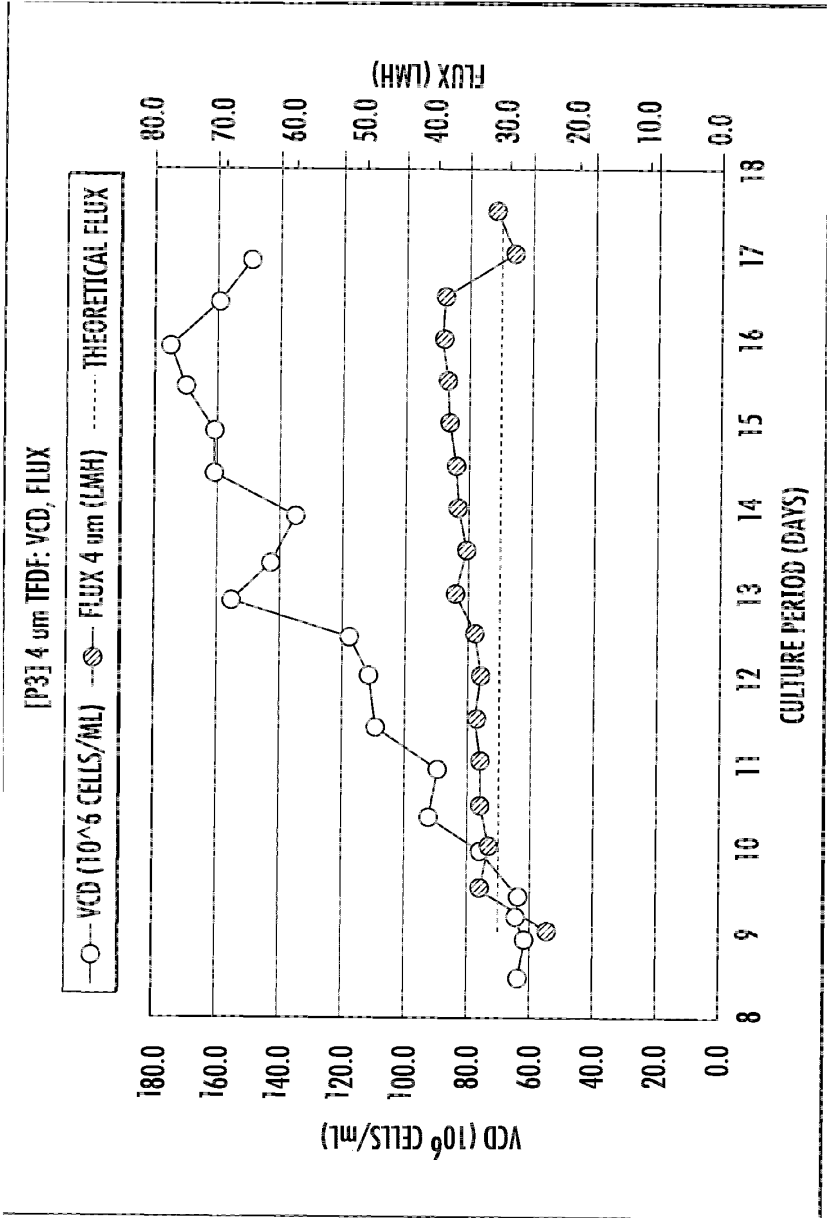


FIG 11

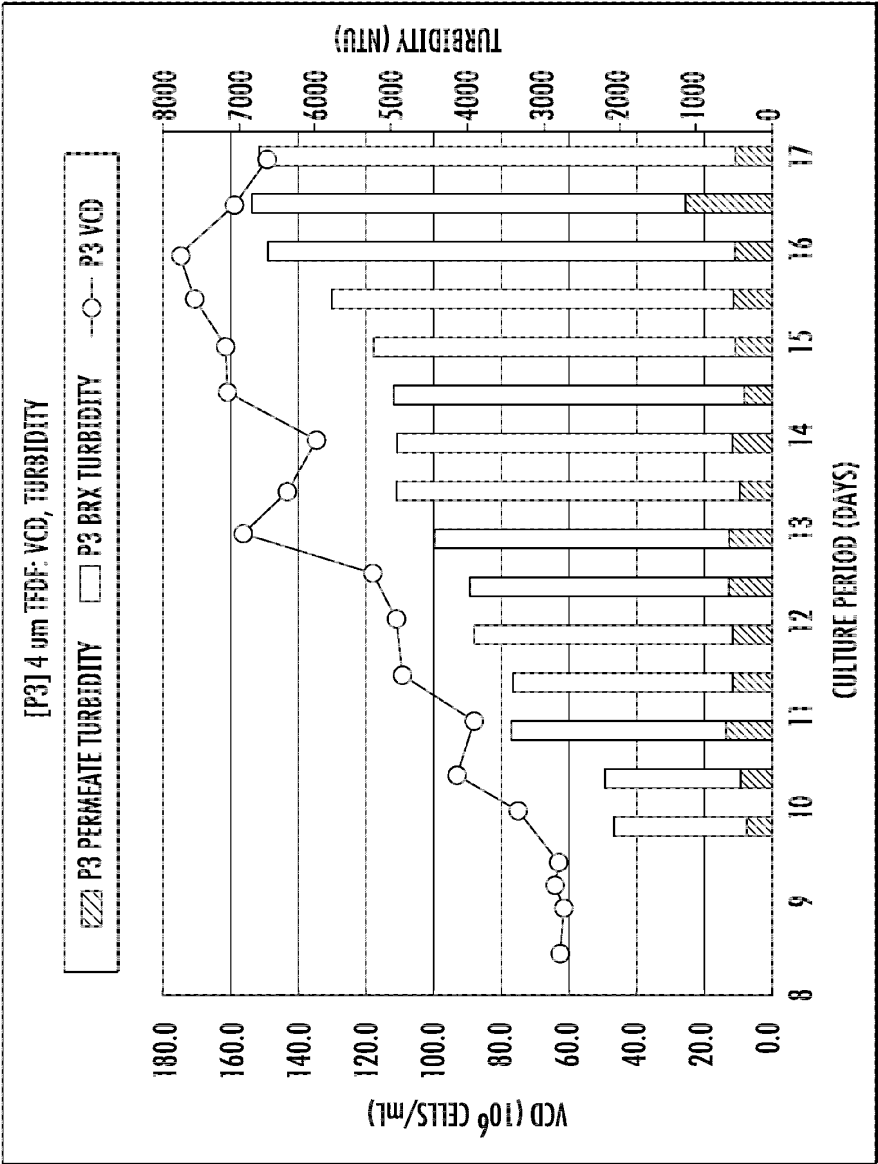


FIG. 12

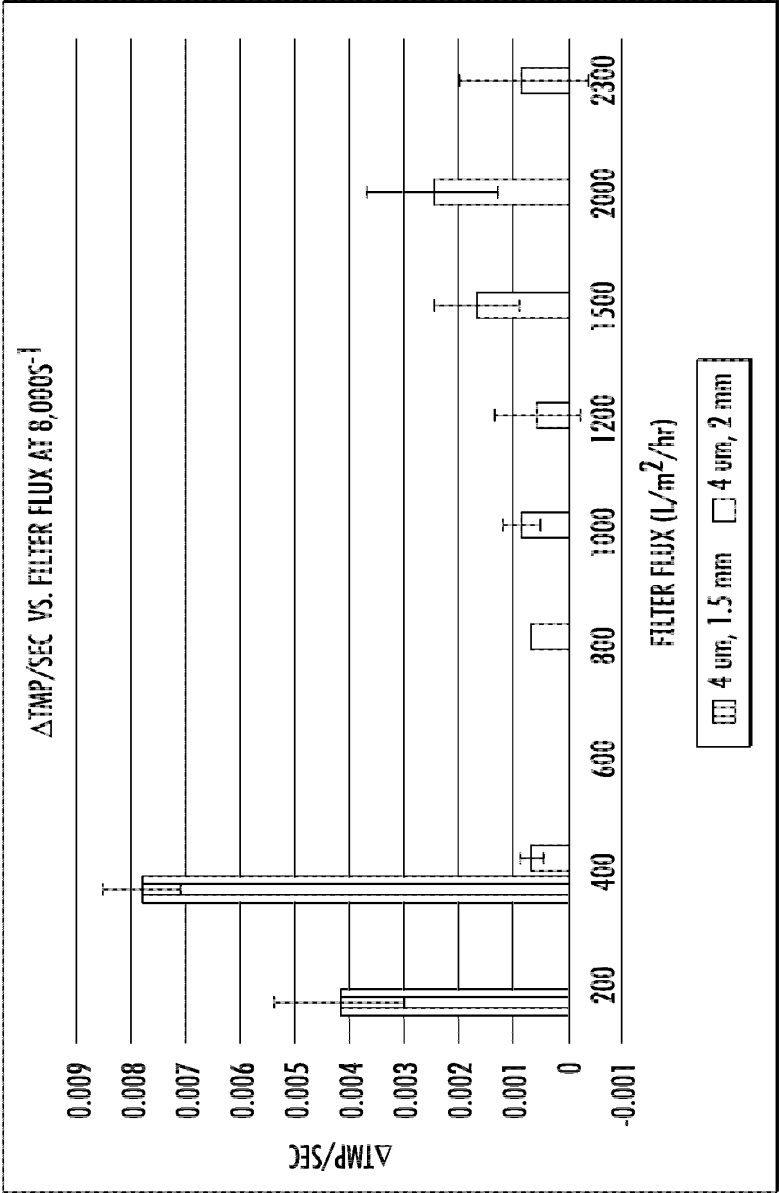


FIG. 13

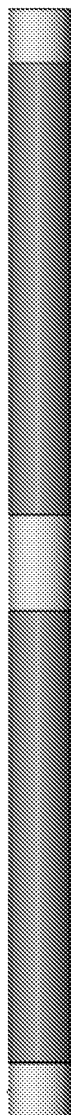


FIG. 14

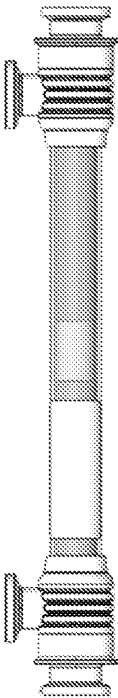


FIG. 15