



## TPP Recommendations

### Medium Volumes in TPP Tissue Culture Vessels

For monolayer cultures, TPP recommends a medium volume to growth area ratio of 0.2 – 0.5 mL/cm<sup>2</sup>. This corresponds to a height of 2 – 5 mm medium covering the cells. The upper limit is set by the gaseous diffusion through the liquid layer.

The media height - and thus the volume in the culture vessel - is a critical factor in the oxygen supply for the cells, i.e. the oxygen transfer rate, OTR (Gstraunthaler et al. 1999).

The number of cells on a confluent plate, dish, or flask vary with cell type. For this TPP gives no recommendations, but indicates source of information such as: Freshny R. Culture of animal cells.

#### 1. Tissue Culture Flask

Product No.	Version	Growth area cm <sup>2</sup>	Medium recom. mL	Medium max. mL
90025	VENT	25	3 - 8	20
90026	Filter			
90075	VENT	75	8 - 22	75
90076	Filter			
90150	VENT	150	15 - 45	170
90151	Filter			
90300	VENT	300	30 - 85	280
90301	Filter			

#### 2. Tissue Culture Flask with peel-off foil

Product No.	Version	Growth area cm <sup>2</sup>	Medium recom. mL	Medium max. mL
90028	Filter	25	3 - 8	20
90078	Filter	75	8 - 15	75
90153	Filter	150	15 – 30	100
90653	Filter, barrier	115	15 – 30	100
90303	Filter	300	30 – 40	280

#### 3. Clipmax







Product No.	Version	Growth area cm <sup>2</sup>	Medium recom. mL	Medium max. mL
70010	Filter	10	4 - 6	7



#### 4. Tissue Culture Tube

Product No.	Version	Growth area cm <sup>2</sup>	Medium recom. mL	Medium max. mL
91243	Filter	10	2	35
91106	VENT	20	3	15

#### 5. Tissue Culture Test Plate

Product No.	Version	No. of Wells	Growth area cm <sup>2</sup>	Medium recom. mL	Medium max. mL
92006 62106 92406		6	9.026	3 - 5	10
92012 92112 92412		12	3.466	1 - 2	5
92024 92124 92424		24	1.864	0.5 - 1	3
92048 92148 92448		48	0.875	0.19 - 0.29	0.2
92096 92196 92696		96	0.322	0.1 - 0.25	0.4
92097 92197 92697		96	0.636	0.1 - 0.25	0.4

#### 6. Tissue Culture Dish

Product No.	Inner-Ø mm <sup>2</sup>	Growth area cm <sup>2</sup>	Medium recom. mL	Medium max. mL
93040	34	9.2	1,8 - 2,7	4
93060	53	22.1	4,5 - 6,6	15
93100	87	60.1	12 - 18	60
93150	137	147.8	29 - 44	155



## 7. TubeSpin® Bioreactor (Suspension Cells)

Product No.	Volume graduation mL	Shaker Ø mm / speed rpm	Medium recom. mL
86050	50	50 / 250	35
87015	15	50 / 250	10
87017	15	50 / 180	10
87050	50	50 / 150	35
87056	50	50 / 150	35
87450	450	50 / 150	250
87600	600	50 / 150	400