Recommendations on the ideal culture medium volumes for TPP cell culture flasks, dishes and test plates

Biochrom AG Information

Biochrom AG distributes test plates, dishes and flasks from TPP in different sizes to be used for cell cultivation. Differentiation between these products is made on the basis of technical features, such as diameter or data regarding growth surface and filling volume.

For use in practice, additional features, such as seeding cell count or culture medium volume, become significant. In this context, TPP has now developed certain recommendations in cooperation with Biochrom AG.

Please note: all recommended values depend on the respective cells in use. Calculation examples refer to the use of HeLa cells.

1 Cell culture test plates

TPP tissue culture test plates show the highest operational standards of quality:

- lid with air-venting system guarantees controlled gas exchange with low evaporation
- sloped edge allows placement of the lid in one position only
- yellow inscription field: yellow on yellow – match!
- growth area on spherical zone only
- absolutely flat growth surface
- crystal clear transparency
- alpha-numerical labelling of the wells

TPP tissue culture test plates with 96 wells – manufactured according to ANSI/SBS-3d-standards – are standardised with an interleaved barcode 2/5. The white base colour is embossed firmly on the test plate. A loss of identification through detachment is excluded.

Tab. 1: figures for cell culture test plates

cat. no.	number of wells	shape	growth surface per well (mm^2)	cell count for seeding	cell count at confluence	culture medium addition (ml)
P 92006 P 92406	6	flat	903	0.30×10^6	1.10×10^6	3-5
P 92012 P 92412	12	flat	366	0.10×10^6	0.41×10^6	1-2
P 92024 P 92424	24	flat	191	0.05×10^6	0.22×10^6	0.5 -1
P 92096 P 92696	96	flat	34	0.90×10^4	4.00×10^4	0.1 - 0.25
P 92097 P 92697	96	round	36	0.94×10^4	4.10×10^4	0.1 - 0.25

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2 Cell culture dishes

Tissue culture dishes from TPP offer a large growth area and secure handling:

- the TPP surface treatment of the growth area optimally enhances the proliferation of the cells
- the gripping ring: often copied, never reached!
- protruding points in the gripping ring render the dish grip secure
- lateral yellow inscription field on the lid
- stacking ring on the lid and corresponding on the base result in an extremely secure stacking feature
- quick orientation through the clock numbering system in the base of the dish
- cams on the inside of the dish lid function as spacer and enable a constant movement of air as well as limit condensation

Tab. 2: figures for cell culture dishes

cat. no.	inner diameter (mm^2)	growth surface (mm^2)	cell count for seeding	cell count at confluence	culture medium addition (ml)
P 93040	34	920	0.3×10^6	1.1×10^6	2
P 93060	53	2210	0.6×10^6	2.5×10^6	3
P 93100	87	6010	1.7×10^6	6.8×10^6	10
P 93150	137	14780	4.2×10^6	16.7×10^6	20

3 Cell culture flasks

The TPP tissue culture flasks are subject to the following quality aspects:

- uniform even surface of the growth area.
- crystal clear transparency.
- stable, slip-free stacking of several flasks
- bilateral marking area
- accurate volume scale for optic control of the filling volume

For optimum tissue growth, the growth area is treated using a method developed by TPP. This enhances cell adhesion and cell growth.

Tab. 3: figures for cell culture flasks

cat. no.	version	dimension (cm^2)	growth surface (mm^2)	cell count for seeding	cell count at confluence	culture medium addition (ml)
P 90025	VENT	25	2500	0.7×10^6	2.8×10^6	3-5
P 90026	Filter					
P 90075	VENT	75	7500	2.1×10^6	8.5×10^6	8-15
P 90076	Filter					
P 90150	VENT	150	15000	4.2×10^6	16.9×10^6	15-30
P 90151	Filter					
P 90300	VENT	300	30000	8.4×10^6	33.8×10^6	30-50
P 90301	Filter					

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4 Further product details

- To find these products in our online shop go to: http://www.biochrom.de/en/products/plastic-for-cell-culture/.
- Please contact info@biochrom.de to order your free sample.