

Frequently asked questions

[Why use BIOFLOAT™ coating technology for your research?](#)

BIOFLOAT™ coating technology provides a highly defined, fully inert cell- and protein-repellent surface for cell culture labware and devices. Compact and reproducible spheroids are rapidly generated on BIOFLOAT™ coated surfaces, even with challenging cell types. Sticky proteins are inhibited to adsorb to your cell culture labware and thereby prevent cell adhesion.

[Which cells are compatible with the BIOFLOAT™ coating technology?](#)

BIOFLOAT™ coating technology is compatible with broad range of human and animal derived cell lines or primary cells. This new technology is developed to generate cell spheroids; therefore, any cell line can be used which is known to form such spheroids, or it can be used to develop new organoid models containing spheroids with cell lines of your choice. In Tab. 1 you can find a selected number of cell lines cultured with BIOFLOAT™ coating technology.

Tab. 1 List of cell lines

Cell lines
3T3 (Mouse fibroblasts)
HepG2 (Human hepatoma cell line)
Primary Cynomolgus hepatocytes (Monkey)
Primary hepatocytes (Human)
hDPSC (Primary human dental pulp stem cells)
hDPSC+Panc1 (Human pancreatic cancer cell line)
FAMPAC (Human pancreatic adenocarcinoma cell line)
PRH (Primary rat hepatocytes)
PRH+ HHStC (Human hepatic stellate cells)
PRH with RHStC (Rat hepatic stellate cell)
H3122 (Human Lung adenocarcinoma)
H2228 (Human Lung adenocarcinoma)
H1975 (Human Lung adenocarcinoma)
MCF-7 (Breast cancer cell line)
MDA-MB231 (Breast cancer cell lines)
MCF10A (Breast cancer cell lines)
D492 (Breast epithelial stem cell like cell line)
D492HER (Tumorigenic breast epithelial stem cell of D492)
RPMI (B-lymphocytes myeloma cell lines)
Capan-1 (Human pancreatic adenocarcinoma Cell Line)
Mia-Paca (Human pancreatic cell line)
HCC1433 (breast cancer cell line)
Neuronal stem cells (HN9 differentiated)
iPSC-Gata6 (induced pluripotent stem cells)

[Which products are available with the BIOFLOAT™ coating technology?](#)

Choose between the ready-to-use 96-well plate or DIY BIOFLOAT™ FLEX coating solution to modify a broad range of plastic and glass surfaces.

[What are the applications of BIOFLOAT™ FLEX coating solution?](#)

The BIOFLOAT™ FLEX coating can be easily used to create a homogeneous and robust coating for your cell culture products, which is stable under standard culture conditions. One pipetting or rinsing step is enough to passivate your surface on the nanometer scale without altering the geometry of your device. The coating solution allows to treat different formats of plates, microfluidic

devices or bioreactors, which are amenable for 3D spheroid screening approaches or organoid models in cancer research or toxicology.

[Which surfaces are compatible with the BIOFLOAT™ FLEX coating solution?](#)

The BIOFLOAT™ FLEX coating solution is applicable to a broad range of hydrophobic polymer and glass surfaces such as polystyrene (PS), polycarbonate (PC), polydimethylsiloxane (PDMS), polyethersulfone (PES), cycloolefin copolymer, polyvinylidene fluoride (PVDF), polyethylene (PE) and optical quartz glass.

In order to ensure a high affinity of the coating, the culture surfaces MUST NOT be tissue-culture treated. Cultureware compatible with the BIOFLOAT™ FLEX coating solution are labeled as non-adherent cell culture or not-treated suspension culture products from common suppliers.

Examples can be found below:

- ThermoFisher: <https://www.thermofisher.com/order/catalog/product/179820#/179820>
- Greiner: <https://shop.gbo.com/de/germany/products/bioscience/microplatten/>
- Falcon: <https://ecatalog.corning.com/life-sciences/b2c/US/en/Cell-Culture/Cell-Culture-Vessels/Multiwell-Plates/Falcon%C2%AE-Plates/p/351143>
- Sarstedt: <https://www.sarstedt.com/produkte/labor/allgemeine-laborartikel/mikrotestplatten/produkt/82.1581.001/>
- Imaging labware: <https://www.thermofisher.com/de/de/home/life-science/cell-culture/cell-culture-plastics/chamber-slides-coverglass.html>

[How does the BIOFLOAT™ technology modify the surface of your device?](#)

BIOFLOAT™ FLEX coating solution instantly creates a monomolecular coating on your surface, which does not modify the surface geometry of your device. Owing to its highly anti-adhesive properties, cell-to-cell interactions are favored, leading to the formation of highly uniform spheroids which float in the medium without interaction with the surface. The coating strongly adheres to the surface and is stable under standard culture conditions including repetitive media exchange.

[Is the BIOFLOAT™ FLEX coating solution toxic to cells?](#)

BIOFLOAT™ FLEX coating solution was designed for culture of eukaryotic cells. All products undergo a quality control to ensure the sterility and for the exclusion of bacterial endotoxins. Therefore, our products are not cell toxic and support the formation of vital cell spheroids.

[Are BIOFLOAT™ FLEX coated plates compatible for measurements in the plate reader with fluorescent light or UV-light?](#)

BIOFLOAT™ FLEX coated well-plates are compatible for test systems using fluorescent light (excitation and emission wavelength 380 nm - 780 nm). Furthermore, with BIOFLOAT™ FLEX also UV-plates can be coated to allow measurements in the range of 260 nm to 280 nm.

[How long can BIOFLOAT™ products be stored?](#)

Unopened BIOFLOAT™ products can be stored up to one year at room temperature. Storage of opened BIOFLOAT™ products bear the risk of contamination. You can store the opened BIOFLOAT™ FLEX coating solution for four weeks at 4°C. Self-coated as well as our BIOFLOAT™ FLEX ready-to-use well-plates can be stored at 4°C and applied in your experiments as soon as possible to avoid any contamination.

[Is the BIOFLOAT™ technology resistant against organic solvents?](#)

Our BIOFLOAT™ products were developed for cell culture water-based applications. In water-based solutions such as cell culture media our products are very stable. The BIOFLOAT™ FLEX coating solution as well as the coating of the BIOFLOAT™ 96-well plate are not resistant against organic solvent e.g. ethanol or DMSO in high concentrations (>1 % (v/v)).

Does the coating react with chemicals?

All BIOFLOAT™ products do not contain any reactive groups, which can react with other chemicals.

Is BIOFLOAT™ a hazardous good?

BIOFLOAT™ is a nonhazardous good - it contains no substances that are a risk to health. The products are completely biocompatible and non-cell toxic.

How is BIOFLOAT™ disposed properly?

BIOFLOAT™ disposable cell culture products can be disposed similar as your standard cell culture plates. After using our products in cell culture, the plates or any other used surfaces are autoclaved and discarded in residual waste.

Are the BIOFLOAT™ products autoclavable?

BIOFLOAT™ FLEX in the delivered bottle as well as BIOFLOAT™ 96-well plates are not autoclavable. The BIOFLOAT™ FLEX coating solution has a boiling temperature in the range of 70°C-100°C. Only BIOFLOAT™ FLEX treated devices consisting of the following materials are autoclavable (121°C, 15 psig for 20 minutes): polymethylpentene (PMP), polypropylene (PP), polypropylene Copolymer (PPCO), ethylene-chlorotrifluoroethylene copolymer (ECTFE), fluorinated ethylene propylene (FEP), fluorinated ethylene propylene (FEP), polyfluoroalkoxy (PFA), polytetrafluorethylen (PTFE), polysulfone (PSF), polyetherimide (PEI), polyvinylidenfluoride (PVDF), ethylene propylene rubber (EPR).

Are the BIOFLOAT™ products sterile?

All products are subjected to sterilization processes by either electron-beam or sterile filtration and subsequently packed into sterile packages. Further sterilization is not necessary.

Are the BIOFLOAT™ products chemically resistant?

Our precoated 96-well plates consist of polystyrene (PS) and the BIOFLOAT™ FLEX coating solution is filled into bottles, which consist of polyethylene terephthalate (PETG). In Tab.2 chemical resistances of PS and PETG are listed.

Tab. 2 List of chemical resistance

Chemicals	PS	PETG
Acids	Yes	No
Basis (inorganic)	Yes	No
Dry salts	Yes	No
Detergens/surfactans	Yes	Yes
Aqueous solutions	Yes	Yes
Media	Yes	Yes

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