

## FCS-free - Culture media without fetal calf serum

Animal experiments are increasingly being replaced by cell cultures and organs-on-chips, utilizing human cells derived as waste materials after surgeries. These systems are used, for example, in toxicological analysis of chemicals and in drug development. For their survival and growth, the human cells need to be immersed in a culture medium, i.e. a solution containing different nutrients. To date a standard component of culture media has been the blood serum from unborn calves.

However, the production of fetal calf serum (FCS) is cruel. Immediately after slaughtering a pregnant cow, the fetus is cut out of her uterus. Then a big needle is stabbed between the ribs through the skin and muscles directly into the beating heart of the still living calf. Its blood is aspirated until the animal remains bloodless and dies. This procedure is performed without anesthesia, although it is considered that calf fetuses are already capable of suffering. The worldwide annual demand for fetal calf serum amounts to around 800,000 liters. This means that, according to one estimation of the European Biomedical Research Association, each year 1 to 2 million calves worldwide have to die painfully in this way.

### Human hPL from unused blood donations

However, there are FCS-free culture media, for example media containing human platelet lysate (hPL). It is produced from human platelet extracts, which are obtained from expired blood donations that are usually discarded. By using hPL the suffering of unborn calves would no longer be supported. Furthermore, the produced hPL could meet a large percentage of the global demand for animal serum-free culture media. Moreover, the contained growth factors are superior to those of the fetal calf serum.

In addition, there is a wide range of other FCS-free culture media that are derived synthetically or from human blood.

Although the cell cultures must first adapt to the new culture medium, possibly causing some growth restrictions, this phase would usually last for no longer than several weeks. Currently the biggest problem is that many laboratories are inadequately informed about the use of alternative culture media and rely on the established, yet outdated FCS formula, serving as a "gold standard" since the 60s.

The switch to FCS-free culture media is urgent and imperative in order to no longer cause the suffering of millions of calf fetuses!

## Information about suppliers for FCS-free culture media

[GoodCellCulture.dk >>](#)

[FKS-Datenbank \(ein Projekt von 3Rs-Centre Utrecht Life Sciences und Animal Free Research UK\) >>](#)

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### Project websites

- Database on non-animal technologies
- Database on animal experiments
- Botox tests
- Harry helps animals (youth project)
- World Day for the Abolition of Animal Experiments
- Ukraine project
- Campaign against severe experiments
- Congress 'Science instead of animal experiments'
- Fetal Calf Serum (FCS)-free cell culture media

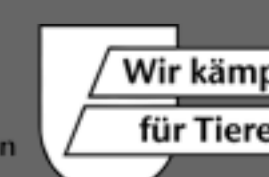
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