CancerTools.org
Global Research Tools Collaborative

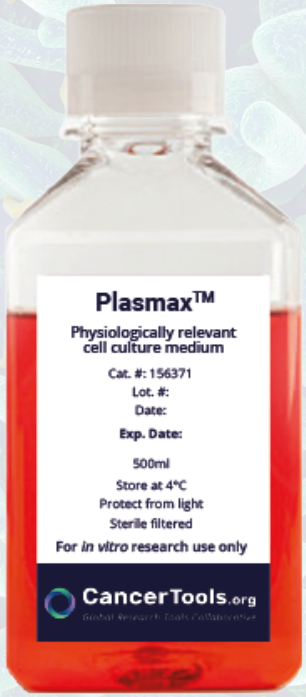
CANCER RESEARCH UK

Plasmax™: Cell culture media to study cancer biology

Discover a new physiologically relevant cell culture medium which mimics the metabolic and physiological profile of human plasma.

Plasmax™ is a pre-prepared media, painstakingly developed to give the best possible representation of *in vivo* conditions and with the benefits of consistency, reproducibility and quality control that can give you confidence in your results.

- Physiologically relevant to the *in vivo* cell environment.
- Designed to improve the metabolic fidelity and biological relevance of *in vitro* cancer models.
- Improved process control with batch-to-batch consistency for high quality results.



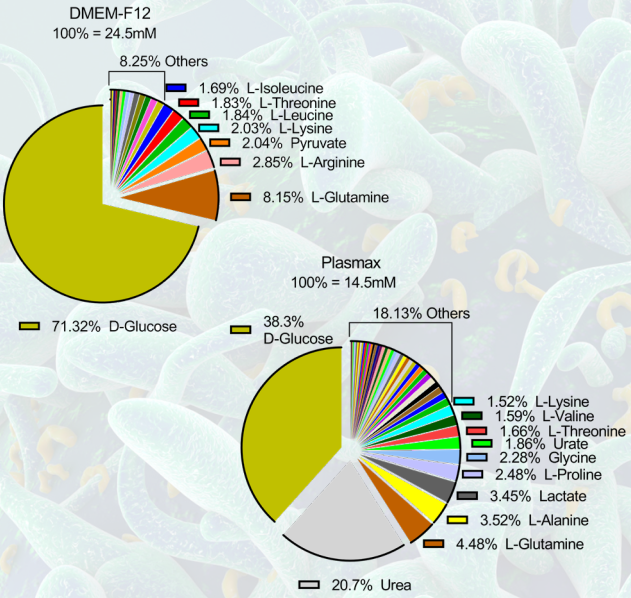
CancerTools.org
Global Research Tools Collaborative

CANCER RESEARCH UK

Physiologically relevant to the *in vivo* cell environment

Plasmax™ contains nutrients utilised by cells *in vivo* at concentrations present in human plasma.

- Allows cell-type-specific metabolism and proportional uptake of nutrients in comparison to traditional media.
- Plasmax™ reverses the direction of a urea cycle reaction catalysed by arginosuccinate lyase.
- Incubation of cancer cells in Plasmax™ prevents pseudo-hypoxia, a phenomenon generally seen in cells cultured with traditional media.

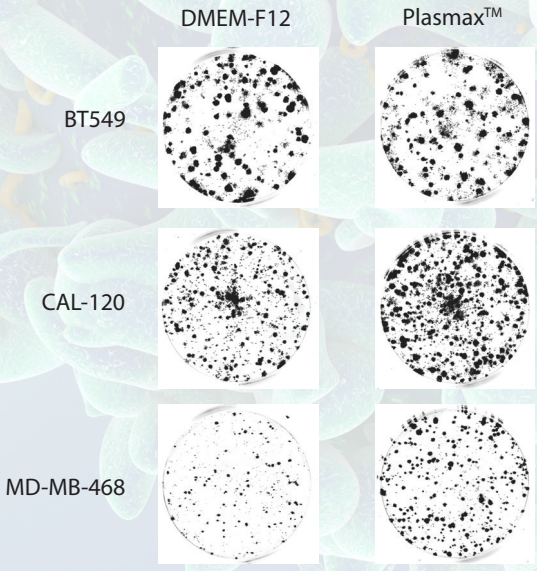


Comparison of the formulation of Plasmax™ and DMEM. Vande Voorde et al., 2019 Sci Adv. Jan 5(1).

Designed to improve the metabolic fidelity and biological relevance of *in vitro* cancer models

Metabolic profiles of cells grown in Plasmax™ are distinct from those grown in DMEM-F12.

- Plasmax™-cultured cells have a metabolic profile comparatively far closer to that of orthotopic xenografts.
- Such effects are apparent after only four days of incubation.
- Plasmax™ can rectify non-physiological metabolic profiles induced by conventional media.



Quantification of a colony formation assay performed with BT549, CAL-120, and MDA-MB-468 cells preincubated (2 days with Plasmax™), seeded at 500 cells per well, and incubated (12 days) with DMEM-F12 or Plasmax™ as indicated. Adapted from Vande Voorde et al., 2019 Sci Adv. Jan 5(1).

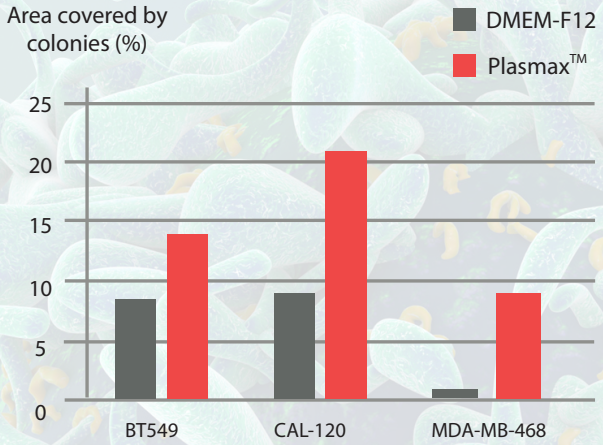
CancerTools.org
Global Research Tools Collaborative

CANCER RESEARCH UK

Enhanced colony formation

Cells grown in Plasmax™ have enhanced colony forming capacity and better approximate the metabolic profile of tumours.

- Selenium in the form of sodium selenite increases the antioxidant capacity of cells.
- Overall colony number and growth of low-density plated Triple Negative Breast Cancer (TNBC) cell lines is increased when incubated in Plasmax™.

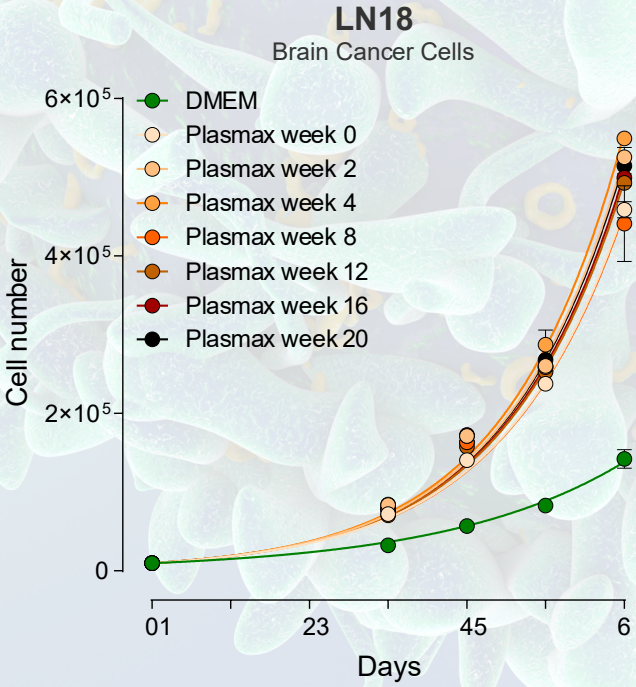


Colony forming assay quantification performed on three triple negative breast cancer cell lines pre-incubated (2 days), seeded at 500 cells per well (n=3) and incubated (12 days) with DMEM-F12 or Plasmax. Adapted from Vande Voorde et al., 2019 Sci Adv. Jan 5(1).

Batch-to-batch consistency at scale

Get consistency across results by using a standardised cell culture media to study cancer biology.

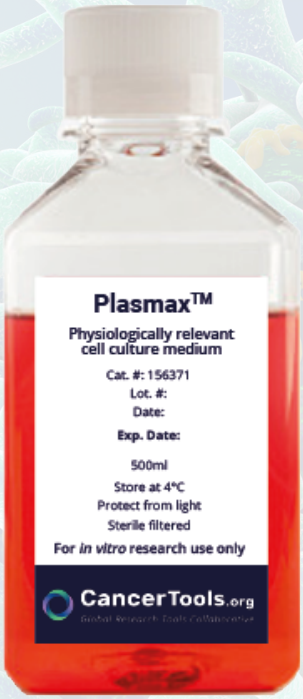
- Eliminate the need to tailor traditional cell media to *in vitro* cancer models by adding additional components.
- Plasmax™ maintains effectiveness throughout its shelf life, with no effect on cell growth from aged Plasmax™.
- Cancer cell lines cultured in Plasmax™ in comparison to traditional media, aged up to 20 weeks, demonstrate higher cell density. Refer to the corresponding figure.



LN18 cells were cultured in 2ml/well of DMEM or Plasmax™ Plasmax™ media was either prepared on day0 from frozen stock components (Plasmax week 0) or left at 4°C for up to 20 weeks (plasmax week 2-20). Tardito Group, 2020 (unpublished data)

CancerTools.org
Global Research Tools Collaborative

CANCER RESEARCH UK



About CancerTools.org

CancerTools.org's mission is to create an embracing non-profit, global community of researchers, institutes and societies, to make research tools available from and to cancer researchers around the world, to accelerate cancer discoveries.

www.cancertools.org
marketing@cancertools.org