



Plant Cell Technology

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Patent No. 5,750,402

Product Information

PPM™ - Plant Preservative Mixture

plant culture preservative and biocide

Product Number PPM

Storage Conditions 39°F / 4° C

Product Description

Plant Preservation Mixture (PPM™) is a robust broad-spectrum biocide formulated for use in plant tissue culture. PPM™ targets bacteria and fungi in plant tissue culture growth media as well as contaminated tissue. It affects key enzymes in the Krebs cycle and in the Electron Transport Chain. Depending on the dose and the level of contamination, PPM is a biocidal component in plant culture medium. In addition, it may also function as a biostatic compound as a preventative measure. When diluted with plant growth media it is effective as a microbiocide (i.e. bactericide and fungicide) against non-human health pathogenic organisms component of liquid or semi-solid plant culture media.

PPM™ is effective for most seed bearing plants - angiosperm, as well as gymnosperm,- however, it is not recommended for use in ferns, mosses, algae and aquatic plants. Optimization may be required to maximize potency. While PPM is an excellent tool in the prevention and elimination of culture contamination it is not a substitute for aseptic laboratory techniques and appropriate air handling systems are recommended.

Usage

The instructions listed below are for general use. Optimization may be required.

Composition Proprietary(See MSDS for list of active ingredients)

Physical Properties

Physical form: Solution

Appearance: Clear, colorless to amber

pH: 3.8

Stability

Store vial at 4 C.

See label for expiration date

PPM may be added to media prior to sterilization or directly to sterile media prior to dispensation.

Autoclavable at 1.05 kg/cm² (15 psi) and 121°C for 20 minutes.

PPM should be added **post-autoclave** to media containing **proteins**, prior to dispensing to culture vessels.

PPM at final concentration (diluted in medium) is stable at ambient temperatures for up to 1 month.

Precautions

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. See MSDS for safety, handling, and disposal instructions.

PPM Quick Reference	Maintenance	Sterilization	Agrobacterium
Concentration (v/v)	0.05 – 0.2%	5.0% (see note)	0.05
Duration	Continuous	4 – 12 hours	Continuous
Note	Plant tissue types vary, optimization is required. For freshly isolated protoplast or callus use 0.05% Higher concentrations may result in toxicity or uptake	In 3X MS salts (use dry powder formulation from commercial companies) Do not use in combination with other sterilization techniques. Do not adjust pH. Treated tissues should be placed directly into culture medium of choice containing 0.05% PPM.	May be added to antibiotic cocktail.

PATENT NO. 5,750,402 - The formulation of PPM in tissue culture media at certain concentrations and the use of PPM in tissue culture at certain concentrations to prevent or eliminate microbial contamination is protected by US patent No. 5,750,402. Patents have been issued in Canada, New Zealand, Australia, the European Community, Israel and other countries. It is also patent pending in many other countries of the world.

References

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