



About Plant Cell Technology & PPM™

Plant Cell Technology, Inc. develops, produces and markets innovative solutions for commercial and research plant tissue culture laboratories and plant growers.

Despite the most stringent use of sterile techniques and aseptic conditions, the contamination of plant cell and plant tissue cultures remain a persistent problem.

PPM™ (Plant Preservative Mixture) prevents the germination of both bacteria and fungi spores. PPM™ is a heat stable preservative/biocide that, based on the dose, effectively prevents or reduces microbial contamination in plant tissue culture.

PPM™ can be used as a standard ingredient in plant tissue culture media. PPM is less expensive than antibiotics and can prevent fungal contamination simultaneously.

PPM™ is both biostatic and biocidal. In addition to inhibiting airborne, waterborne and human contact contamination, it also can be used to reduce endogenous contamination.

Advantages over Antibiotics

- PPM™ is broad-based and effective against fungi.
- PPM™ is less expensive than antibiotics, making it affordable for wide and routine use.
- Since PPM™ targets and inhibits multiple enzymes, the formation of resistant mutants towards PPM™ is unlikely.
- PPM™ is heat stable and in general can be autoclaved with media.



Customer Testimonials

Michael Tanabe

Professor Of Plant Science, U. Of Hawaii At Hilo, College Of Agriculture, Forestry And Natural Resource Management

"I decided to try [PPM™] as a medium-incorporated biocide several years ago. Initially, I conducted a simple air test using FS M&S and nutrient agar with and without the recommended level of PPM™. The media combinations were sterilized and exposed to the open air environment for 3 hours. Absolutely no growth of microbes was evident after the cultures were incubated at 29° C for 4 days. I was convinced that PPM™ had biocide activity so I incorporated it into culture media for various tropical plants to determine possible phytotoxic effects. No obvious phytotoxic effects such as chlorosis or necrosis were observed. Additionally, contamination from airborne contaminants in the culture storage room was significantly reduced."

Julie Richards

Research Officer, Crop Biology Resource Centre, South African Sugarcane Research Institute

"The tissue culture laboratory at the South African Sugarcane Research Institute (SASRI) at Mount Edgecombe, KwaZulu Natal, South Africa uses tissue culture for both the transformation and micropropagation of sugarcane. While microbial contamination levels are generally low enough to be acceptable, we have experienced instances where contamination levels rise and become problematic. Such instances are generally attributed to changing environmental conditions.

The use of PPM™ in the above instances has proven very successful in controlling the microbial contamination levels in our tissue culture programme. Furthermore, with the development of new techniques and protocols, it is reasonable to assume that additional problems with contamination are likely to be encountered. PPM™ will therefore continue to be stocked as a standard consumable item in our laboratory."

