# Farber Pham *Diastaticus* Medium

**Intended Use**

Farber Pham *Diastaticus* Medium (FPDM) is used for cultivating *Saccharomyces cerevisiae var. diastaticus* and other yeast with diastatic power that occur in the brewing industry.

**Summary and Explanation**

Farber Pham *Diastaticus* Medium was developed by Dr. Matt Farber and Kent Pham to specifically isolate yeast that exhibit diastatic ability, that is the ability to convert starches to sugars through the production of the glucoamylase enzyme. *Diastaticus* is considered a spoilage yeast in the brewing industry which can lead to over-carbonation, over-attenuation, off-flavor production, burst bottles and the production of excess alcohol. The selective nature of this medium is based off of starch as a sole carbohydrate source, and the addition of cupric sulfate to prevent the growth of brewers yeast.

FPDM supports growth of *diastaticus* as well as some *Brettanomyces* yeast strains. There is no correlation between growth on FPDM and the presence of the *STA-1* gene, a known indicator of glucoamylase activity. There is currently no correlation with growth on FPDM with yeast sporulation, over-attenuation or growth on Lin's Cupric Sulfate Medium.

**Principles**

Yeast extract is a source of trace elements, vitamins and amino acids. Peptone acts as a source of protein. Soluble starch is added as a carbohydrate source. Cupric sulfate is a fungicide intended to inhibit the growth of ordinary brewers yeast, *Saccharomyces cerevisiae*. Dipotassium orthophosphate acts as a buffer. Ammonium chloride is a source of ions that stimulate yeast metabolism. Agar is the solidifying agent.

**Directions for Preparation**

1. Suspend 73.4 grams of the dehydrated powder in 1 Liter of purified or deionized water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
3. Autoclave at 115° C for 15 minutes.
4. Cool and use as instructed in the directions for use. **Prepared media must be used within 24 hours.**

**Directions for Use**

1. Inoculate prepared media with sample. Ensure that sample concentration does not exceed 1000 cells for best results.
    a. Cell concentrations greater than 1000 cells per plate can cause filming and false positives.
2. Incubate aerobically at 28° C for 48 hours. After 72 hours false positive growth may occur, and *diastaticus* colonies will exhibit brown discoloration.

**Cultural Response**

| Organism | Recovery |
|---|---|
| *S. cerevisiae var. diastaticus - Belle Saison* | Good |
| *S. cerevisiae var. diastaticus – French Saison* | Good |
| *S. bruxellensis trois* | Good |
| *S. cerevisiae – London Ale* | None |
| *S. cerevisiae – English Ale* | None |

**Availability**

Weber Scientific FPDM Agar, 500 grams Cat. No. 3118-90

Visit weberscientific.com or contact info@weberscientitific.com for availability and pricing info.