

## Methylamine Tungstate

**AGR1219**

Methylamine Tungstate is an excellent negative stain as it gives good contrast and wets both grid films and specimens very well. The greatest attribute of Methylamine Tungstate is the low buffering capacity which means that the pH of any mixture of stain and specimen assumes the pH of the specimen without any chemical reaction taking place.

Make up Methylamine Tungstate at 2% w/v in double distilled water. Check the pH of the water initially and then that of the Methylamine Tungstate solution. 2% Methylamine Tungstate should be approximately pH 6.5. Store in a dark bottle at 5 degrees C, do not expose to air for long periods as Carbon dioxide uptake from the atmosphere can change the pH. It is advisable to put the stain through a sterilising filter before using, as organisms have been known to grow in Methylamine Tungstate- do not add sodium azide to Methylamine Tungstate as it reduces negative staining efficiency. If additional wetting is required, e.g. with purified virus, a small amount of Bacitracin (0.5% w/v) used in a ratio of 2:1 stain/wetter is useful. When this mixture is used to extract leaf tissue for virus assay the Bacitracin appears to aid virus release from the cytoplasm.

### Hazards

No toxicity data exists concerning Methylamine Tungstate so the material must be treated with caution. Methylamine Tungstate is not volatile but like all negative stains containing heavy metals, must not be sprayed in the open laboratory. Care should be taken not to contaminate hands, face or apparatus and benches during use. Mouth pipetting should not be permitted. Vessels used for Methylamine Tungstate should be well rinsed before passing for washing up. Waste should be treated as for heavy metal residues and NOT thrown down the sink.