CMC-4M (Lot 81101)

11/99

PREPARATION:

Carboxymethyl cellulose (CMC 4M) is prepared by carboxymethylation of cellulose with chloroacetic acid to a degree of substitution of ~0.4 (i.e. approximately 4 carboxymethyl groups per 10 anhydroglucose units), and it is modified to a medium viscosity range (~600 centipoise at 25^{O}C, at 2% concentration)(MW ~90,000). Cellulose is a polymer of 1,4-ß-linked D-glucosyl residues.

PROPERTIES OF CMC-4M:

Degree of carboxymethylation (DS):	~ 0.4.
Colour:	Off-white coloured powder.
Solubility:	Forms a colloidal suspension in water or buffer at 1.0% w/v.
Enzyme susceptibility:	Readily hydrolysed by *endo*-1,4-ß-glucanase.

DISSOLUTION:

To 90 ml of vigorously stirring water at 90^{O}C gradually add 1.0 gram of CMC-4M.
Continue stirring for about 1 hour (until the polysaccharide is completely dispersed).
Cool the solution to room temperature and add 5 ml of sodium acetate buffer (2 M, pH 5.0).
Adjust the volume to 100 ml and store the solution in a well sealed glass container at 4°C.
To prevent microbial infection, a few drops of toluene are added to the storage bottle.