

Enteric Film Coating Agent **CMEC**

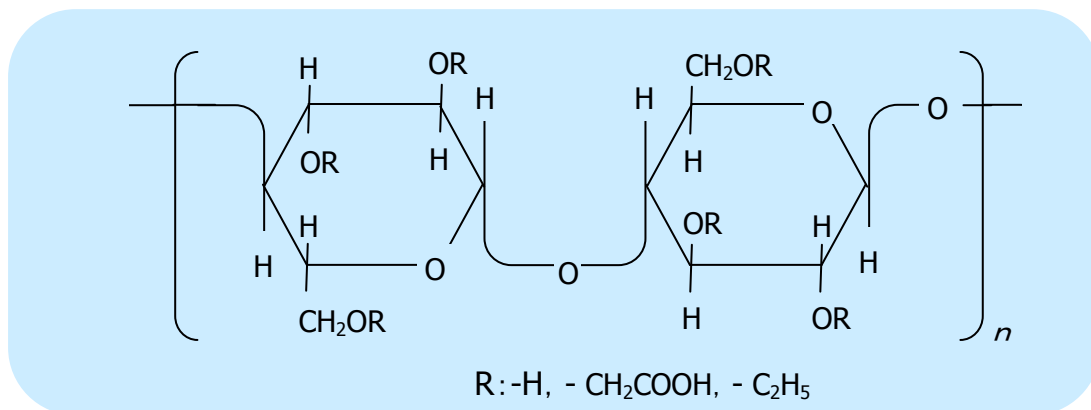
CMEC is prepared by partial carboxymethylation of cellulose followed by partial ethylation.

CMEC fully complies with the specifications of JPE "Carboxymethylethylcellulose". Main applications of CMEC are enteric film coating material and matrix-forming substance for controlled release formulation.

Also used as carrier of solid dispersion to encourage solubility of poorly soluble drugs.



《Structural Formula》



《Size of CMEC Molecule》

Weight-average molecular (Mw)	Number-average molecular weight (Mn)	Variance Ratio (Mw/Mn)
4.9×10^4	1.4×10^4	3.5

*Representative value, not specification.

《Solubility》

CMEC is insoluble in water, but soluble in water and ethanol (ethanol 70-90%) combined.

Formulation

{ CMEC	8%
{ Ethanol	73.6%
{ Water	18.4%

Recommended Method :

Add CMEC to water : ethanol = 1 : 0.5 solution to disperse.
Then add remaining ethanol and agitate to dissolve until smooth.

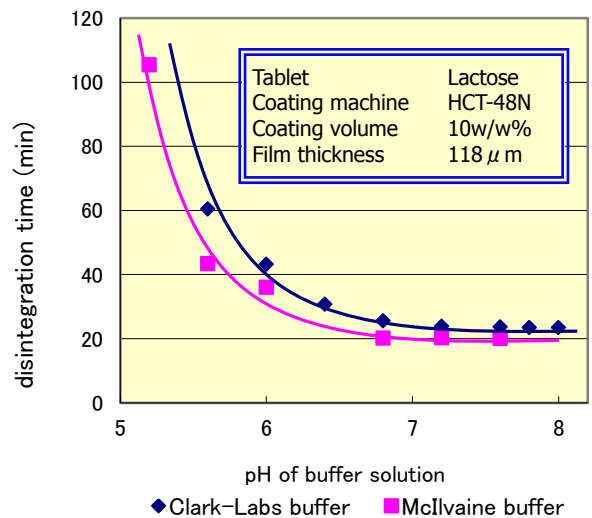
《Characteristics》

◆ **Chemically stable**

The chemical structure of CMEC is built up by ethel linkage, difficult to be hydrolyzed with CMEC itself being chemically stable.

◆ **Disintegration of pH dependency**

The disintegration behavior of tablets coated with CMEC depends on the pH regardless of the buffer solution. It is slower to disintegrate in a lower pH but faster in a higher pH. By taking advantage of this property, using enteric material is possible. Also, the combination with controlled release materials of pH independency enables the formulation of various dissolution profiles.



◆ **As a Matrix-Forming Material**

CMEC is used for a matrix-forming material with API. The release speed rate is controllable by adjusting the ratio of API and CMEC.

◆ **Improve dissolution of poorly soluble drugs**

CMEC is a carrier of solid dispersion for improving solubility of poorly soluble API.

◆ **Protective coating for sugar-coated tablet**

The CMEC film thickness of 100μm has suitable moisture prevention. It is effective to use CMEC as protective coating agent on sugar-coated tablets including water-sensitive API.