

PRESENTATION ABSTRACT

Presentation topic: FMC's excipients for controlled release

Speaker:

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Presentation abstract:

There are various ways in which FMC's controlled release (CR) technology can be applied.

One is the use of a controlled release coating.

Sustained release coatings function by creating a semi-permeable membrane through which drugs must pass in order to become available for absorption, creating a diffusion-controlled rate of release.

Aquacoat® ECD is our recommendation for this application because it:

- Allows solvent free coating since it is completely aqueous
- Offers the greatest formulation flexibility
- Provides stable and reproducible release rates

The second option is embedding the drug in a modified release matrix. FMC's technology involves the use of swelling/gelling hydrophilic polymers, like alginates or carrageenan.

Hydrophilic polymers may be included in tablets in order to form a viscous, gelling layer which retards water penetration and acts as a barrier to drug release. Drug release is accomplished by diffusion through and erosion of this barrier. Zero-order release profiles can be achieved by selection of appropriate polymers and other fillers/ binders. The use of FMC's carrageenan and alginate in this application provide:

- Suppression of acid burst seen with basic drugs
- 24-hour release rates
- Release profiles that can be tailored by combining gelling and viscous grades