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Custom Synthesis | Excipients | Active Ingredients

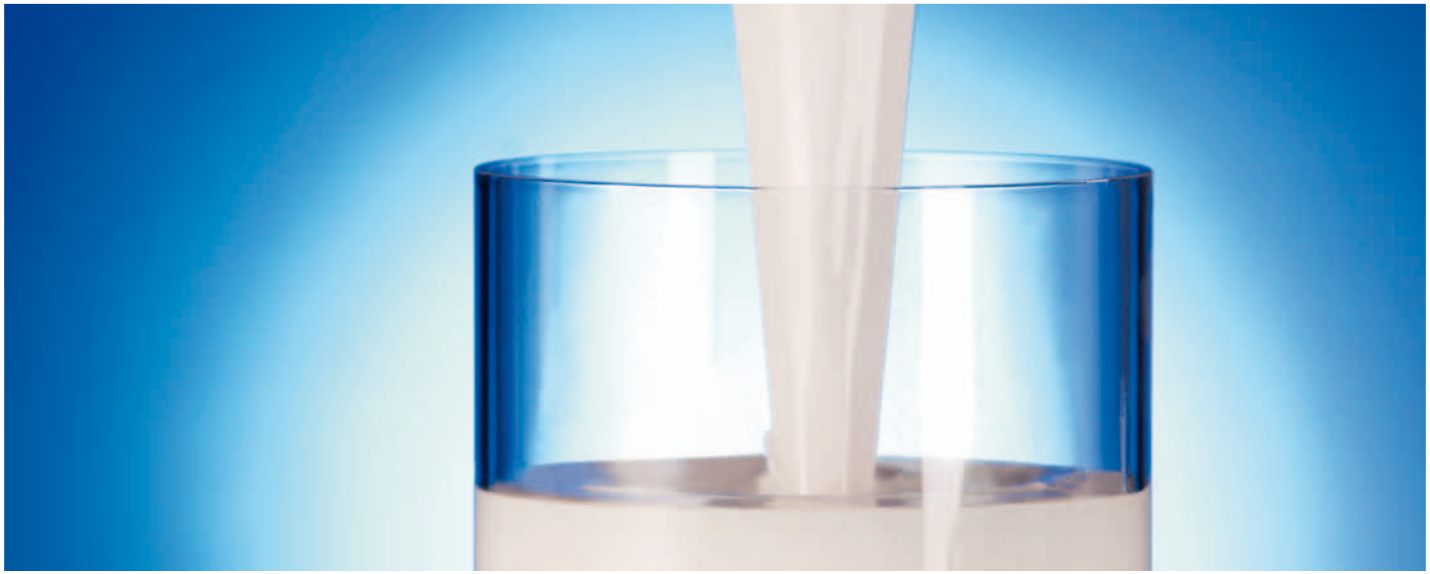
Kollicoat® Smartseal 30 D – Active Protection.

Breaking new ground in taste masking and moisture protection.

Thorsten Cech,
an enabler in excipients

BASF
The Chemical Company

The first aqueous dispersion of a protective polymer.



“Kollicoat® Smartseal 30 D combines a strong protective effect with efficient processing” ...

… says Thorsten Cech, an expert in BASF coatings. He and his colleagues are confident that the new polymer will help customers tackle challenges in formulating bitter or moisture-sensitive active ingredients. Kollicoat Smartseal 30 D offers superior protection for tablet, pellet and particle formulations – even in a very thin film. This helps pharmaceutical companies streamline and accelerate film coating.

The best of both worlds

Bitter and moisture-sensitive active ingredients can pose quite a challenge to formulators - but not anymore. Either of the two desired effects, concealing unpleasant tastes and creating a moisture barrier, can be achieved with one functional film-forming polymer.

Kollicoat Smartseal 30 D is highly impermeable to water vapor, helping preserve the potency of sensitive active ingredients. What’s more, the polymer is highly stable in saliva and specifically soluble in gastric juice. This ensures effective protection from unpleasant tastes in the patient’s mouth and rapid release and onset of action of active ingredients in the stomach.

An aqueous polymer dispersion, Kollicoat Smartseal 30 D is easy to handle, and convenient to apply. And since it can be used in highly concentrated coating suspensions and at high spray rates, you benefit from reduced process times – and significant cost savings.

Chemical structure

Kollicoat Smartseal 30 D is an aqueous dispersion of a co-polymer comprising methyl methacrylate (MMA) and diethylaminoethyl methacrylate (DEAEMA). It also contains macrogol cetostearylether and sodium lauryl sulfate as stabilizers.

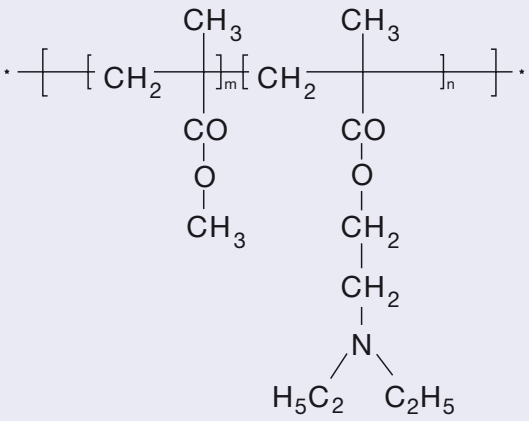


FIGURE1 Chemical structure of the polymer

Immediate release of active ingredients in the stomach

Results from dissolution tests demonstrate resistance in neutral saliva and rapid release of the active ingredient in the acidic environment of the stomach.

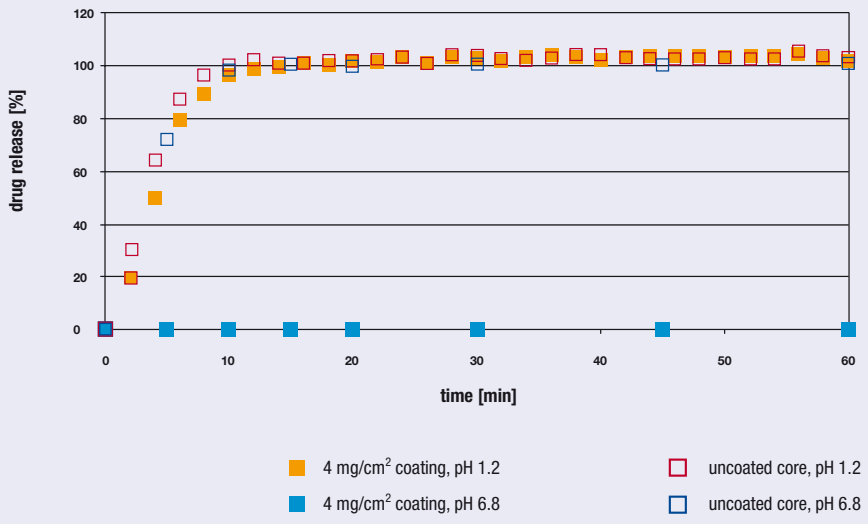


FIGURE2 Dissolution of caffeine tablets in neutral and acidic media

Smart protection from unpleasant taste

Kollicoat Smartseal 30 D hides bitter taste with a significantly reduced coating thickness. For example, it masks the taste of quinine hydrochloride tablets more effectively than other leading protective coatings.

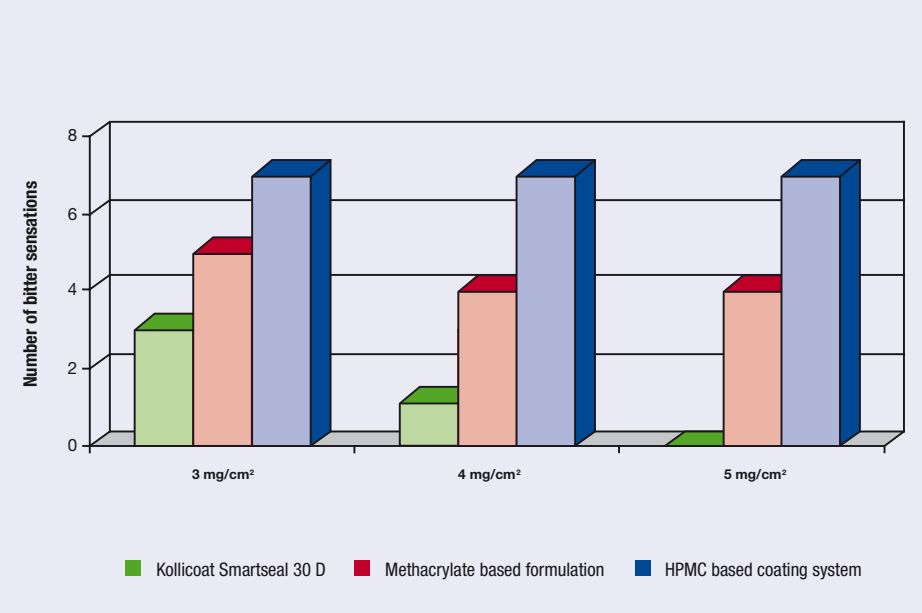


FIGURE3 Number of individuals (out of seven) who reported a bitter taste when putting quinine hydrochloride tablets into the cheek

Effective sealing against moisture

Film coatings with a low water vapor permeability can delay the moisture uptake of sensitive cores. Tests on isolated films show that Kollicoat Smartseal 30 D has a lower water vapor permeability than other leading protective coatings.

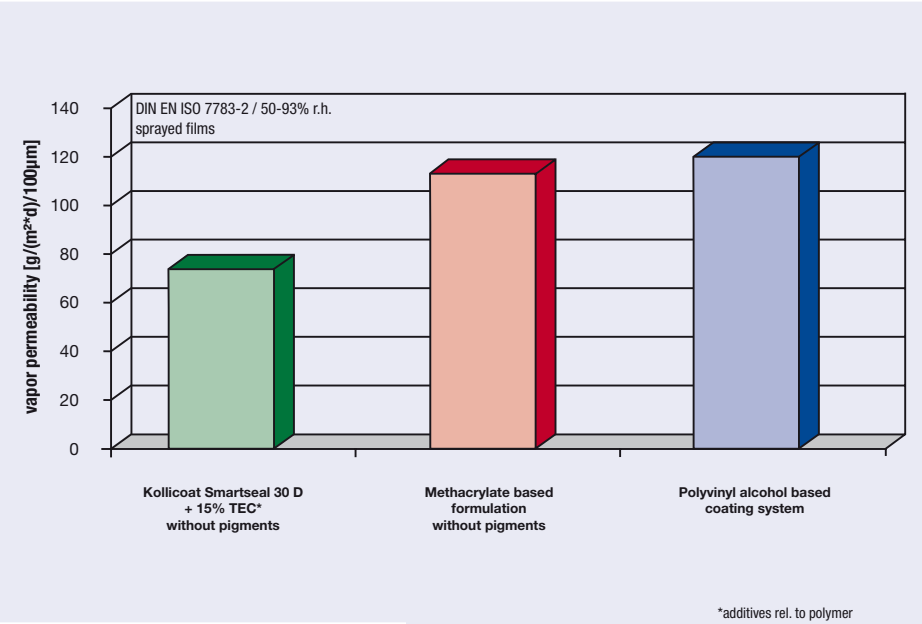


FIGURE4 Water vapor permeability of isolated films

Smart protection from unpleasant taste

Effective sealing against moisture

Fast release of active ingredients

Easy and economical film coating

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- Smart protection from unpleasant taste
- Effective sealing against moisture
- Fast release of active ingredients
- Easy and economical film coating

What Kollicoat® Smartseal 30 D can do for you.

Kollicoat Smartseal 30 D is the first water-based polymer dispersion for taste masking and moisture barrier applications. It was developed to simplify and accelerate aqueous film coating operations, and opens new doors for formulating tablet, pellet and particle coatings.

Contact us to find out how Thorsten Cech and his colleagues can help you tackle your formulation challenges – and how Kollicoat Smartseal 30 D's active protection can make you more successful.

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