Omyanutra® 300 DC

Boost your nutraceutical formulations

THINKING OF TOMORROW

Omyanutra 300 DC

Direct compressible, porous excipient for nutraceuticals

Producing nutraceuticals in solid dosage form is complex and faces many challenges. In production, manufacturers choose either wet or dry granulation, or, which is becoming more popular, direct compression. Direct compression (DC) results in the shortest, most efficient and least complex way to produce tablets. Additionally, the DC tableting method is most suitable for moisture- or heat-sensitive ingredients, like herbal extracts or essential oils.

Despite its many benefits, direct compression, however, requires a critical selection of the excipient, contrary to the granulation methods since the raw material isn't further processed before tableting. Free-flowing and highly compressible excipients like Omyanutra 300 DC are required for a successful directly compressed tablet.

Omyanutra 300 DC is the direct compressible version of the Omyanutra 300 excipient. The free-flowing granules of the DC-variant allow for easy manufacturing, resulting in less tablet weight variability and much more compactable tablets. Due to its high compactability, tablets containing Omyanutra 300 DC feature increased mechanical stability which leads to less tablet friability.

Omyanutra 300 DC offers superior compactability than benchmarks such as lactose and microcrystalline cellulose (MCC). In addition, the mineral provides fast disintegration thanks to the particles' porous structure. This porosity also enables easy carrying and release of active ingredients.

Omyanutra 300 DC is based on functionalized calcium carbonate (FCC). FCC is natural calcium carbonate that became a new mineral composition and structure, through a recrystallization process.

Benefits

- *Direct compressible excipient*
- *Easier manufacturability*
- *Hard tablets at low compression forces*
- *Superior compactability*

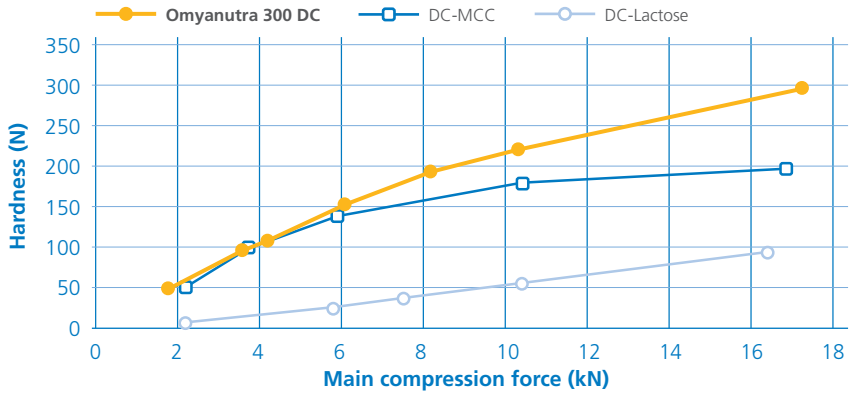
Features

- *Free-flowing, direct compressible granules*
- *Porosity allows for carrying and release of actives*
- *Made from high-purity, natural mineral*
- *Non-nano engineered, non-GMO material*

SEM image of Omyanutra 300 DC

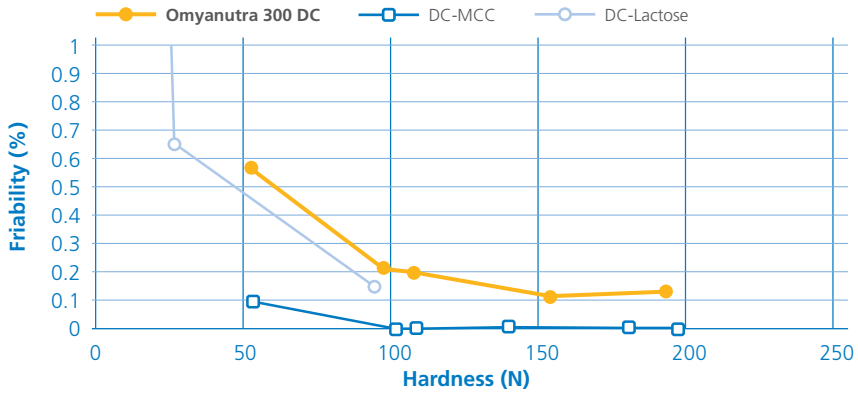
Omyanutra grades are free from nano-particles, non-GMO, and made of high-purity minerals.

Compactability

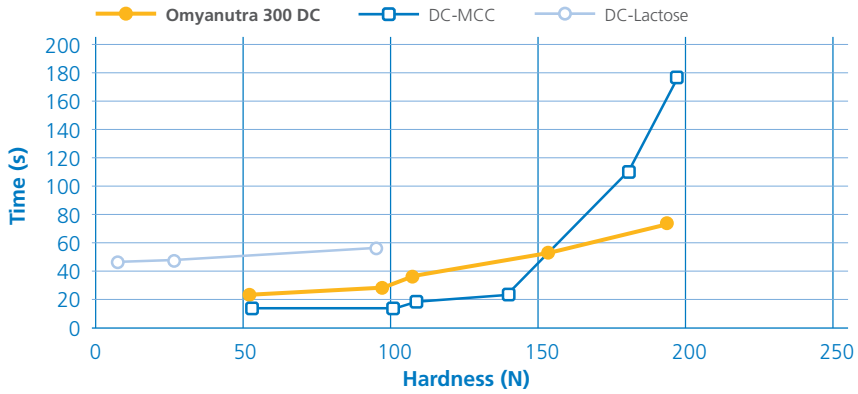


Omyanutra 300 DC is more compactable than the benchmarks lactose and MCC, independent from tablet hardness and the main compression forces applied.

Friability compared to tablet hardness



Disintegration time compared to tablet hardness

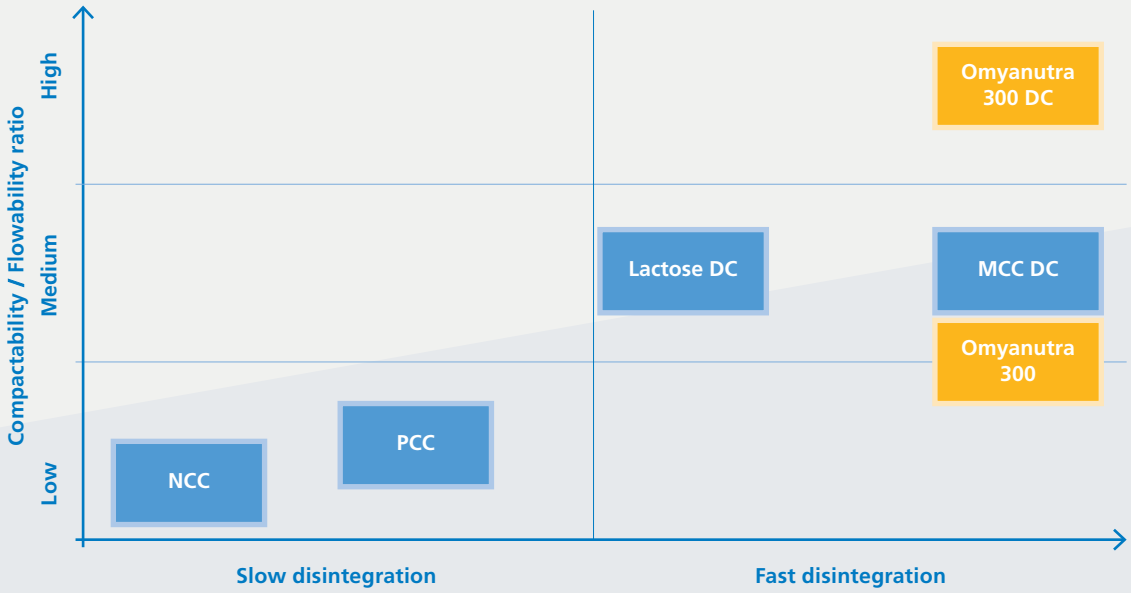


Omyanutra 300 DC provides fast disintegration of hard tablets, driven by the particle porosity.

Typical product data

Product	d50 (µm)	d90 (µm)	Mean flow (sec/100g)	Loose bulk density (g/ml)	Tapped bulk density (g/ml)
Omyanutra 300 DC	90	160	30	0.5	0.6

Product Positioning



Omya International AG, CH-4665 Oftringen, email: info.pharma@omya.com, omyanutra.omya.com

Source: Omya International (2021/09) EN