

## High performing carrier for Pancosma excellence flavours

### 1. The substantial role of silica as a flavour carrier.

When describing our powder flavours, a high importance is given to the aromatic fraction, volatile components, retention agent... It is also important not to forget the substantial role of the flavour carrier which is sometimes unfairly considered with a secondary importance.

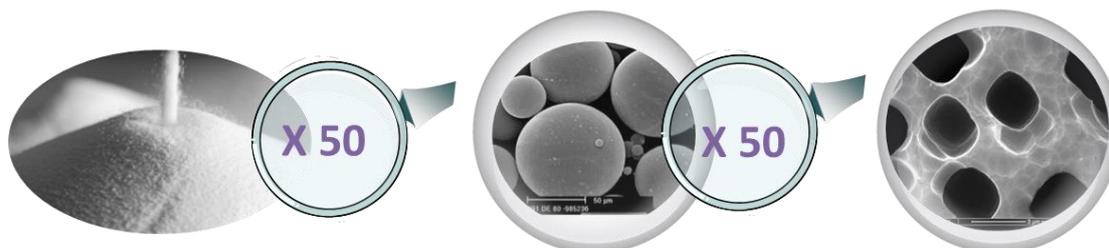
Carriers have a crucial impact on the flavour behavior as well as on the formula cost. It is therefore important to know in details their role, parameters and impact on the finished product.

**What is a flavour carrier?** A flavour carrier is an inert support that absorbs the flavouring liquid base. It releases then little by little the aromatic volatile fraction such as a fragrance diffuser or a pomander. There are a high number of different carriers (organic carriers, calcium carbonate, clay, silica...). They all have different characteristics and impacts.



**Why Pancosma uses silica as a carrier?** Pancosma uses precipitated amorphous silica obtained from inorganic synthesis process. Nowadays, it is considered as the best carrier fulfilling requirements of high standard flavours: neutrality, stability, porosity. It is 100% compliant with animal feed standards and totally safe.

*Silica with different magnifications and its porous structure:*



**What distinguishes different silica?** There is a great diversity of silica depending on their physicochemical parameters such as absorption capacity, absorption kinetic, particle size, flowability, humidity, density... Each one of these characteristic will influence the flavour behavior.

### 2. Our selection criteria for silica

To select or control our silica, we measure many parameters and check their impact on the flavour properties such as flavour handling, dust & flowability, visual homogeneity, physical stability, aromatic intensity, aromatic stability.



In the Research News 47, article “BECAUSE POWER IS NOTHING WITHOUT CONTROL: IMPORTANCE OF SILICA FOR FLAVOURS” explains in detail the series of tests and measurements made at Pancosma for a new silica approval. It perfectly illustrates that a slight silica variation can lead to an important impact on the finished flavour characteristic. Evaluation parameters are numerous and only a few numbers of candidates fulfill all the required parameters.

*Silica with different physical quality:*



Caking lumps → **No**



Non free flowing → **No**



Free flowing, no lumps → **OK**

We also select our silica according to flavour requirements and purpose such as speed release, load level and particle size. As an example, for flavour containing SUCRAM<sup>®</sup>, we use thin silica (100 microns) for particle size homogeneity. For our TEK<sup>®</sup> flavour, micro-pearl silica has been selected. Our high performing silica differs from standard ones, conferring our flavours optimum effect and ease of use in the feed.

### 3. Conclusion

As for all raw material part of our flavours, carrier plays a significant role in the whole product equilibrium and efficiency. Its choice is of great importance for Pancosma.

Silica is the most common flavour carrier used in feed. A very wide range of silica can be found on the market.

All physicochemical parameters will impact the flavour behavior and therefore the flavour efficiency in the feed.

Pancosma drastically selects the silica that perfectly fulfills high standard flavour requirements.

