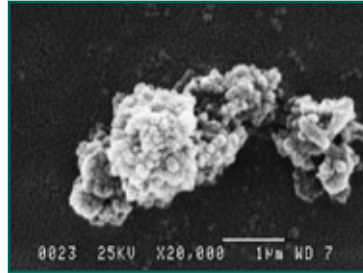


# Kobo Ingredients For Oil Control

## Silica Shells

Silica Shells are hollow ellipsoids of highly porous Silica. They have a very high absorption capacity, up to **5 times** their own weight.

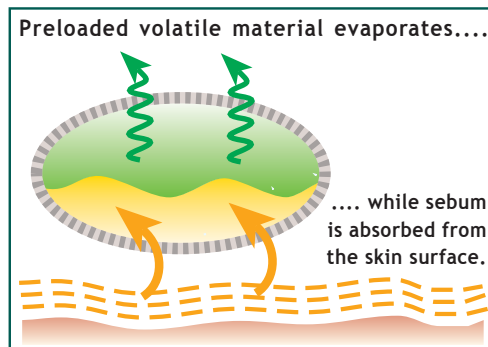
To prevent absorption of formula ingredients by Silica Shells, they can be preloaded with a volatile liquid. When applied onto the skin, this volatile material will evaporate, leaving Silica Shells empty and available to absorb sebum.



SEM picture of Silica Shells

## Hydrophobic Silica Shells

For easier formulation in oil phases, Amino Silicone treated Silica Shells (Silica Shells-SH) have been developed. Since Amino-Silicone Treatment has excellent **hydrophobicity**, it will absorb excess sebum without affecting any moisture on the skin (patented by Kobo).



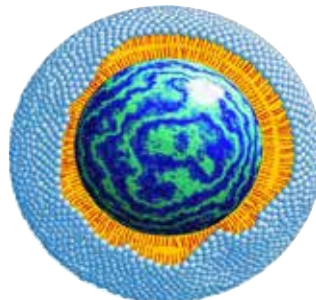
Schematic representation of how Silica Shells may help oil control treatments

## Delivery System: Glycospheres

Glycospheres are submicron delivery systems (200 nanometer in diameter), consisting of a hydrophilic inner core (crosslinked starch) and of layers of natural lipids (see drawing on the right). They are able to entrap and protect labile active ingredients, and deliver them to the first layers of the skin to potentialize their activity.

They can be loaded with **antioxidants** and **vitamins** (plant polyphenols, vitamin C, E or A) or with **enzymes** (papain, an enzyme suitable for enzymatic, non aggressive peeling). When entrapped within Glycospheres, **Triclosan** exhibits a much higher (up to 80%) antibacterial activity and remains active for an extended period of time (more than 72 hours).

Schematic representation of the structure of Glycospheres



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