



# OPTI WHITE – PERFECT WHITENING

Replacement of Titanium Dioxide

**SALT**  
MINERALS

## WHY IS THE FOOD INDUSTRY INTENSIVELY ENGAGED IN THE REPLACEMENT OF TITANIUM DIOXIDE, TiO<sub>2</sub>?

- **Consumer preferences:** Consumers are showing increasing interest in natural ingredients in food. The use of titanium dioxide can be perceived as unnatural, which leads to lower acceptance by the end consumer.
- **Changed EFSA assessment:** Studies show potential health risks from TiO<sub>2</sub> nanoparticles in food.
- **Regulatory uncertainty:** Some countries around the world are considering restrictions on TiO<sub>2</sub> in food. From August 8 2022, foods containing TiO<sub>2</sub> may no longer be placed on the market in the EU. Approval for the food additive has been withdrawn across the EU.

## WHAT DOES AN ALTERNATIVE TO TiO<sub>2</sub> NEED TO DO?

1. whitening effect in a variety of basic products and applications
2. minimal or no undesirable sensory side effects
3. pH, temperature and storage stability
4. no side reactions with other ingredients such as vitamins, flavors or colorants
5. reasonable economic efficiency
6. natural product (incl. manufacturing process)

## WHAT SOLUTIONS DOES SALT MINERALS OFFER?

- Complete product line to replace TiO<sub>2</sub> in the food industry.
- „Ready to use“ products, ready for immediate use with appropriate multipliers.
- All products of natural origin and compatible with BIO regulation.
- Safe use of all products guaranteed.
- OptiWhite CS: poorly soluble, but sufficiently soluble for absorption in the body; additional source of calcium; stable in acids; no negative sensory effects.
- OptiWhite CS as an optimal substitute for TiO<sub>2</sub>.
- OptiWhite CC and OptiWhite MC slightly less expensive; reduced acid stability; lower costs (CIU).
- OptiWhite CC or MC as a good alternative in cost-sensitive product lines.

## WHICH MULTIPLIERS SHOULD BE USED COMPARED TO TiO<sub>2</sub>?

SALT Minerals solution	Application	Particle size (optimal)	Particle size (OptiWhite)	Recommended use factor (OptiWhite)
OptiWhite natural CS	Dragees	0,6 µm	0,6 - 2 µm	12,5x
	Drinks	1,25 µm		9,5x
	Hard caramels	4,7 µm		27x
OptiWhite natural CC	Dragees	0,4 µm	0,2 - 1 µm	15x
	Drinks	0,6 µm		20x
	Hard caramels	1,5 µm		25x
OptiWhite natural MC	Dragees	0,3 µm	0,4 - 1,6 µm	20x
	Drinks	0,5 µm		25x
	Hard caramels	1,3 µm		36x

## WHAT ARE THE ADVANTAGES OF THE RESPECTIVE ALTERNATIVES?

OptiWhite CS is currently the most optimal product in terms of the above-mentioned market requirements. It combines all of the above-mentioned properties, except that OptiWhite CC and OptiWhite MC score better in terms of cost-effectiveness. The use of starches requires enormous multiplication factors in order to achieve identical results to the use of TiO<sub>2</sub> and is therefore only recommended for special applications.

## DO YOU HAVE ANY QUESTIONS? YOUR CONTACT AT SALT MINERALS GMBH FOR ALL MATTERS RELATING TO THIS TOPIC:

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