Biomicrogel®
BMG-C4

Increasing extraction
of various vegetable oils

BIOMICROGEL®

Sk Resident

BMG-C4 IS DESIGNED TO INCREASE THE EXTRACTION OF VARIOUS VEGETABLE OILS

BMG-C4 is

- Designed to increase the extraction of various vegetable oils during their production at the stages of settling and centrifugation.
- Absorbed on solid organic particles (palm fruit cells) and forms thin polymer films on their surface that repulse oil droplets.

BAGS 25 kg

SOLUTIONS

The reduction of palm oil losses in wastes

OUR CLIENTS:

textima

KEMINDO
YOUR SOLUTION PARTNER®

ECONOWATT
อีโคโนวัตต์

XH2O
Multiplying Water

MSA

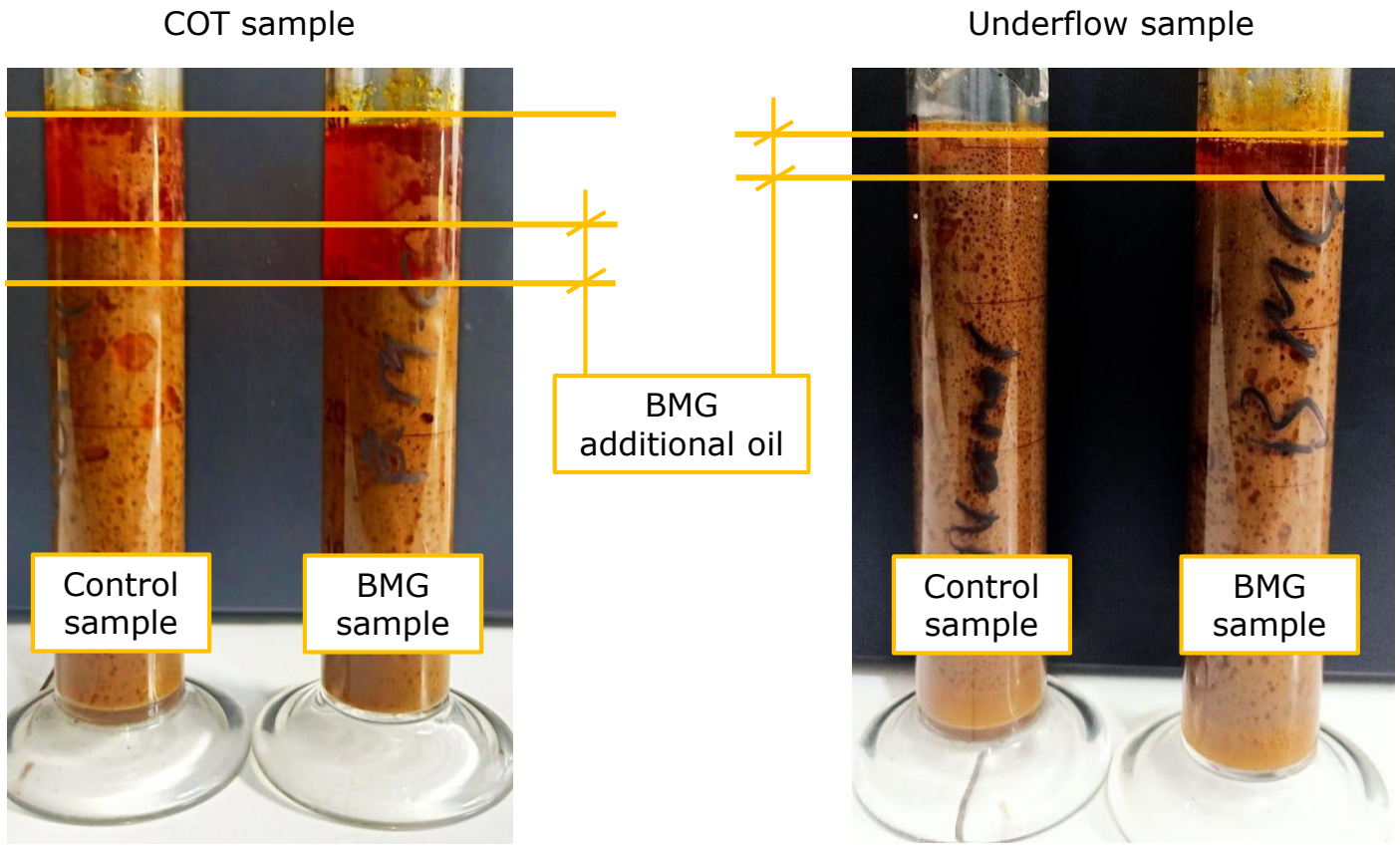
PT. BRAWIJAYA ENERGI TAMA

PT. KAMPAR TUNGGAL AGRINDO

SOLUTIONS

BMG-C4 EFFECT DEMONSTRATED LAB TESTS

- Increasing CPO extraction in COT sample by 28% after 75 minutes of settling.
- 8 mm of oil in underflow sample vs 0 mm in control sample after 60 minutes of settling.



DESCRIPTION AND OPERATING PRINCIPLE

Biomicrogel® – is submicron polysaccharide particles obtained from by-products of agrifood industry: apple and beetroot pulp that possessing reversible solubility.

BMG-C4 is designed to increase the extraction of various vegetable oils during their production at the stages of settling and centrifugation stages. An aqueous solution of BMG-C4 has the property to separate oil from solid particles.

BENEFITS

- Non-toxic, non-flammable, 100% biodegradable;
- Applicable in the food industry;
- Does not affect oil quality;
- It reduced the oil loss in the final heavy phase and in solid phase by 33% (from 0.84 to 0.62%);
- Increasing by 7% oil extraction rate.

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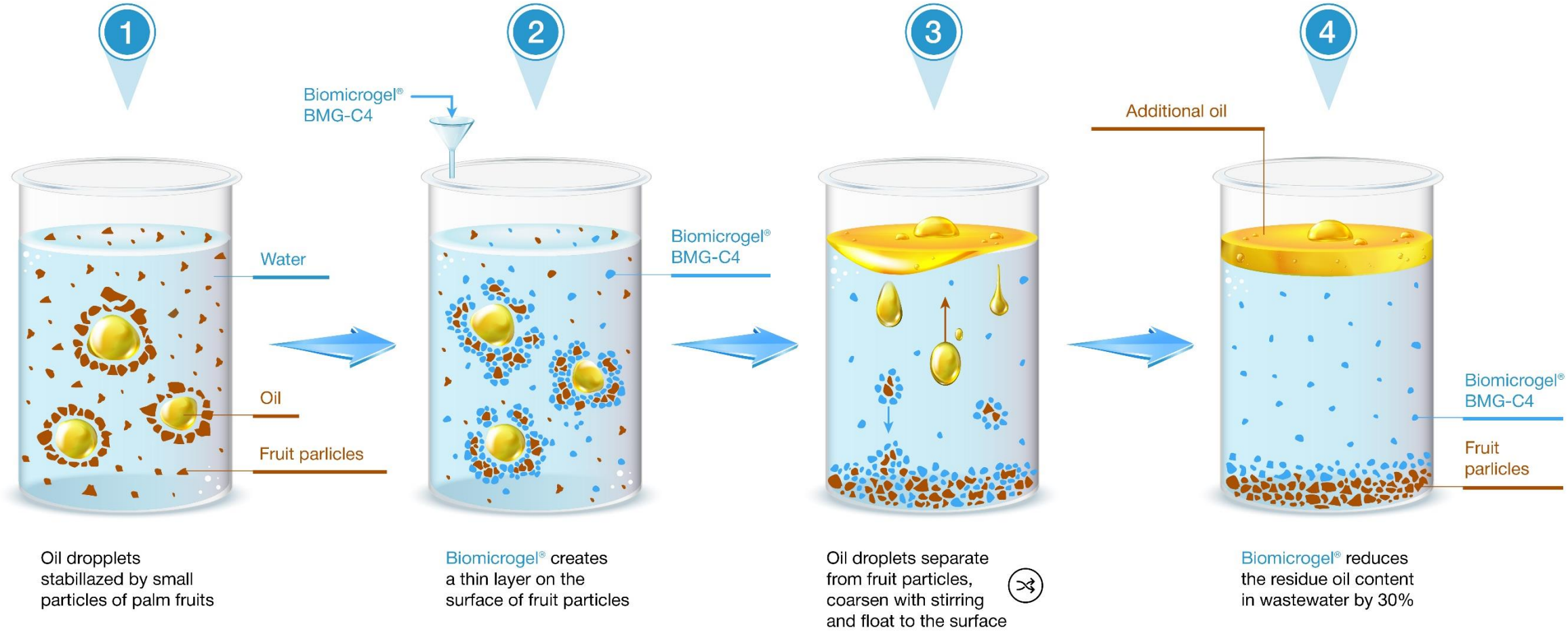


PHYSICAL PROPERTIES

Aggregate state	Fine-dispersed powder with inclusions of particles*
Color	Varies from beige to yellow-brown it is allowed the inclusions of white color*
Bulk density	0.44 ÷ 0.70 g/cm^3
pH value (3% water solution)	1.25 ÷ 1.50

*- in case of a significant temperature drop during transportation and/or storage, BMG-C4 may stick together and darken, what does not affect the performance of the product.

APPLICATION

BMG-C4 is designed to increase the extraction of various vegetable oils during their production at the stages of settling and centrifugation. An aqueous solution of BMG-C4 has the property to separate oil from solid particles. BMG-C4 is used as a 3% working solution.

METHOD OF MEASURING RESULTS

Confirmation of the performance of BMG-C4 products is carried out by determining the residual oil content in waste (liquid and solid) after centrifugation stage.

DOSAGE

The optimal dosage of the BMG-C4 is from 0.3 to 1.0 g of BMG-C4 dry powder per 1 litre of non-oil sludge in DCO flow. BMG-C4 dosage is calculated based on the combined volume of water, non-oil-solid and emulsion, or volume of sludge minus oil volume.

It is recommended to add in the form of a 3% aqueous working solution. The volume of working solution BMG-C4 is from 10 to 33 ml per 1 litre of non-oil sludge in DCO flow.

PREPARATION OF THE WORKING SOLUTION

The working solution of BMG-C4 is prepared in a tank equipped with an overhead stirrer at a stirring speed of 100 rpm by dissolving an appropriate amount of dry BMG-C4 powder in tap water. The dissolution time varies from 10 to 30 minutes.

To prepare a working solution with 3 % concentration – take 30 kg of BMG-C4 dry powder, pour it into a mixing tank and add 970 litre of tap water. The recommended stirring time is 20-30 minutes, or until BMG-C4 is completely dissolved.

STORAGE

After preparation, the working solution of BMG-C4 must be used within 7 days in order to avoid hydrolysis or bacterial or fungal growth and consequent loss of properties.

BMG-C4 is stored in the manufacturer's package in ventilated warehouse premises protected from direct sunlight at a relative humidity of no more than 70% at a temperature not exceeding 37°C in conditions that exclude dust penetration and precipitation.

The guaranteed shelf life of the packaged product is 24 months as from the date of production.

UTILIZATION

BMG-C4 is disposed of in accordance with the current legislation. Use a sealed container to collect wastes. Label it and utilize as Class 5 Hazardous Waste. Disposable or damaged containers utilize as household waste.

SAFE HANDLING MEASURES

WARNING

H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
P260	Do not breathe dust.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

COMPETITIVE ADVANTAGES

	BIOMICROGEL® BMG-C4 REAGENT FOR OIL EXTRACTION
High efficiency	Reduction of vegetable oil losses in wastewater up to 0.3%
Speed rate	Quick separation of oil from solids
Versatility	Stable at high temperatures No special water preparation required
Processability	The solution is easily integrated into an existing scheme
Biodegradability and eco-friendly	BMG-C4 does not cause negative environmental effect BMG-C4 is non-toxic water-soluble polymers based on natural raw material BMG-C4 does not affect oil quality

FLOWCHART OF APPLICATION OF THE REAGENT BIOMICROGEL® BMG-C4

ABOUT COMPANY

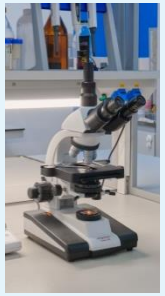
Operates both in Russia and abroad:
South-East Asia, the European Union, the USA, Australia, and Brazil.

Developer and patent holder of solutions based on microgels under Biomicrogel® brand (>100 patents, >60 countries).

2 production sites, 4 chemical laboratories and an experimental site.
Own an R&D facility, engineering department and technical support service.

Resident of the Skolkovo Innovation Center (Moscow, Russia).
Resident of "Nadezhdinskaya" Priority Development Area (Vladivostok, Russia).






ALL BMG PRODUCTS

- Sorbent Biomicrogel® BMG-P1 — Continue to web-site
- Coagulant Biomicrogel® BMG-P2 — Continue to web-site
- Flocculant Biomicrogel® BMG-C2 — Continue to web-site
- Biomicrogel® BMG-C4 product for Increasing the vegetable oils extraction — Continue to web-site
- Spilltex® dip net for petroleum products collection from water surface — Continue to web-site
- Spilltex® filter cloth for laying sumps — Continue to web-site
- Spilltex® filter barrier cloth for shallow rivers — Continue to web-site
- Spilltex® universal filter cloth — Continue to web-site

ALL BMG SOLUTIONS

- Industrial and storm drains cleanup from oils, fats and petroleum products — Continue to web-site
- Coolant processing in metallurgy and pipe rolling — Continue to web-site
- Coolant processing in mechanical engineering — Continue to web-site
- Performance gains in vegetable oil extraction — Continue to web-site
- Oil and petroleum product spill cleanup — Continue to web-site
- Purification of bottom and produced water — Continue to web-site

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BIOMICROGEL®