# Biomicrogel® BMG-C2

flocculant for cleanup of bottom and produced water, and industrial wastewater cleanup from petroleum products.



**Sk** Участник



#### BIOMICROGEL®

## BIOMICROGEL® BMG-C2

#### FLOCCULANT IS SUITABLE FOR:

- cleanup of bottom and produced water,
- industrial wastewater cleanup from petroleum products,
- Water cleanup from petroleum products impurities,
- fat-and-oil substances, and fuels and lubricants in industrial wastewater systems.

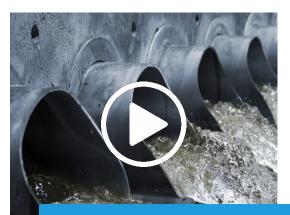


## SOLUTIONS

#### FOR OIL PRODUCTION AND REFINING COMPANIES, ENTERPRISES RUNNING INDUSTRIAL STORM WASTEWATER TREATMENT



Bottom and produced water cleanup



Industrial and storm drains treatment from oils, fats and petroleum products

#### OUR CLIENTS:













## DESCRIPTION AND OPERATING PRINCIPLE

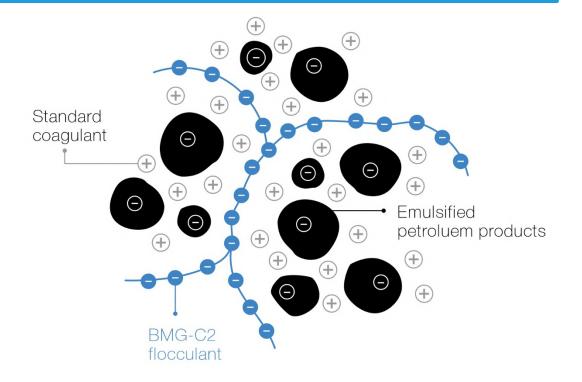
Biomicrogel<sup>®</sup> - is submicron polysaccharide particles obtained from byproducts of agrifood industry: apple and beetroot pulp, cellulose and, starch, possessing reversible solubility.

Biomicrogel® effectively captures mineral and vegetable oils, animal fats, oil and petroleum products in water.

**BMG-C2 FLOCCULANT** is an eco-friendly reagent made from natural polysaccharides that encapsulates petroleum products and allows for their easy separation from water. The flocculant is suitable for water cleanup from all types of oils, petroleum and its products

### CHARACTERISTICS

- Non-toxic and eco-friendly. Fully biodegradable
- Dosages are lower than with standard reagents.
- Localized impurities are easily removed from water.
- Works at temperatures from 0°C to +85°C.
- Works at pH values of 4,5 7,5.
- Regeneration of separated oils and petroleum products is possible.



#### WORKING SOLUTION PREPARATION

Biomicrogel<sup>®</sup> BMG-C200.5 solution is ready for dosing.

Biomicrogel<sup>®</sup> BMG-C210 concentrate should be diluted in water using a static mixer or other suitable mixing equipment allowing for a homogeneous solution preparation.

#### APPLICATION

For water cleanup (water treatment, wastewater treatment) Biomicrogel® BMG-C2 is dosed in the traditional way before the cleaning stage (before the purification equipment). It is necessary to evenly distribute the working solution of Biomicrogel® BMG-C2 in the treated substance. In some cases, Activator-A supplement is required to improve the reaction with contaminants.

NPO Biomicrogel LLC can provide recommendations on the necessary preparation and dosage of BMG-C2.

#### **RESULT MEASURING METHOD**

Confirmation of Biomicrogel<sup>®</sup> products effectiveness is carried out by determining the residual content of petroleum products in water before and after cleanup according to PND F 14.1:2:4.168-2000 "Quantitative chemical analysis of water.

Measuring method of mass concentration of petroleum products indrinking, natural water and treated wastewater through IR spectrophotometry on KN-2m concentration meter"

#### **BIOMICROGEL STORAGE**

The product should be stored in a cool, dry place.

All protective packaging must be preserved until the product is used completely.

After preparation, the working solution of Biomicrogel® BMG-C2 should be used within 60 days to avoid hydrolysis or growth of bacteria or fungi and, consequently, loss of properties.

The warranty period for dry storage is 12 months from the production date.

#### UTILIZATION

Upon release of the sediment from water, Biomicrogel® BMG-C2 flocculant is disposed of in accordance with the current legislation.

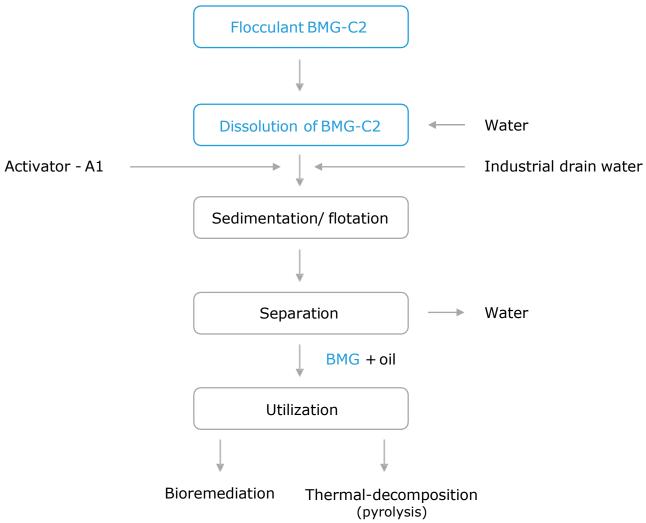
The following FCCW code is applicable: 7 23 301 02 39 4 – "Sediment (sludge) of flotation treatment of oily wastewater containing petroleum products in an amount of less than 15%".

Laboratory testing in the treatment of produced wastewater from oilproducing enterprises has shown that the sediment containing Biomicrogel® BMG-C2 flocculant can be disposed of by feeding it to the head of the water treatment cycle (primary separator). Laboratory analysis data showed that the quality of oil changes slightly and remains within the LOC standards

## COMPETITIVE ADVANTAGES

	BIOMICROGEL® BMG-C2 FLOCCULANT
High efficiency	Treatment result for p/p <1 mg/l
Speed rate	Forms residue 3 times faster than other flocculants
Versatility	Wide operating range of <ul> <li>initial p/p concentrations: 10-5,000 mg/l,</li> <li>temperature: from 0 to +85°C,</li> <li>pH: 2÷8</li> </ul>
Processability	The solution is easily integrated into an existing scheme
Biodegradability and eco-friendliness	Obtained through complex processing of vegetable raw materials, completely safe for the environment
Uniqueness	The technologies are patented in more than <b>50</b> countries around the world

## FLOW CHART OF BIOMICROGEL® BMG-C2 FLOCCULANT APPLICATION



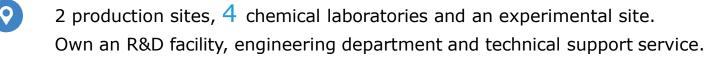
## **ABOUT COMPANY**



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 (>60 patents, >50 countries)



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



## ALL BMG PRODUCTS

- Biomicrogel® BMG-P1 sorbent
- Biomicrogel<sup>®</sup> BMG-P2 coagulant
- Biomicrogel<sup>®</sup> BMG-C2 flocculant
- Biomicrogel<sup>®</sup> BMG-C3 soil and sand cleaning agent
- Biomicrogel<sup>®</sup> BMG-C4 oil extraction agent
- Biomicrogel® BMG-C6 solid surface cleaning agent
- Spilltex<sup>®</sup> dip net for petroleum products collection from water surface
- Spilltex<sup>®</sup> filter cloth for laying sumps
- Spilltex<sup>®</sup> filter barrier cloth for shallow rivers
- Spilltex® universal filter cloth

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## ALL BMG SOLUTIONS

- Industrial and storm drains cleanup from oils, fats and petroleumproducts
- Coolant processing in metallurgyand pipe rolling
- Coolant processing in mechanical engineering
- Performance gains in vegetable oil extraction
- Oil and petroleum product spill cleanup
- Clean up of solid surfaces from oils and petroleum products
- Soil washing from petroleum products
- Purification of bottom and produced water

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## CONTACT DETAILS BIOMICROGELS GROUP



