

NeoBio[®] reduces sludge volume by up to 56.8%

Business case: April - May 2010

NeoBio ranked first for sludge volume reduction and cost-benefits by NGO Solidarités International.

Challenge: reduce wastewater sludge volume from latrines in displaced persons camps

Objective: increase latrine lifespan, reduce maintenance cost

Test method: latrine wastewater samples in 5L bottles

Products tested: NeoBio Septic, NeoBio Septic+, NeoBio Latrine, EM (Enhanced Microorganisms) A, EM B. Contact us for details.

Rank	Product	dosage	% sludge reduction
1	NeoBio Septic +	double	56.8%
2	NeoBio Septic	double	44.1%
3	NeoBio Latrine	double	40.6%
4	NeoBio Septic +	simple	38.6%
5	NeoBio Latrine	simple	37.3%
6	NeoBio Septic	simple	35.1%
7	EM A	double	33.3%
8	EM B	double	31.1%
9	EM B	simple	25.0%
10	EM A	simple	24.4%



NeoBio: technical data sheet

Country of origin: France

Nature: natural microorganisms

Safety: Class 1, harmless

Purpose: to digest organic waste

Action: eliminate nuisances and pathogenic agents, stop pollution, reduce sludge volume

Packaging: water-soluble 25gr sachets, ready to use

Usage: wastewater treatment in homes, buildings, factories, restaurants, latrines, emergency response, public health and sanitation improvement

Importance of reducing sludge volume

Sludge build-up is a major issue in all latrines and wastewater treatment systems. Suspended solids in wastewater accumulate on piping, tank walls and bottom. Solidifying rapidly, they clog pipes and pumps, which require regular cleanup and repair to remain functional. Incurred costs, added to periodically removing sludge, add up fast.

A portion of the sludge solidifies daily and cannot be removed by regular pumping. After some time, latrines have to be closed and another one built to replace them.

NGO Solidarités International's main goal in conducting sludge volume reduction trials was to identify the best eco-friendly way of increasing latrines lifespan. There is a total of 8,000 latrines in the camp they manage, where more than 40,000 people have been living for years. Wastewater treatment is

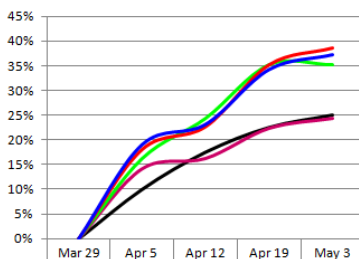
directly linked to the population's health and also impacts the surrounding communities and environment.

Wastewater samples were taken from latrines and treated with single and double dosage of all tested products.



Weekly laboratory tests were conducted and sludge volume reduction benchmarked from March 29th until May 3rd, when the final results were published.

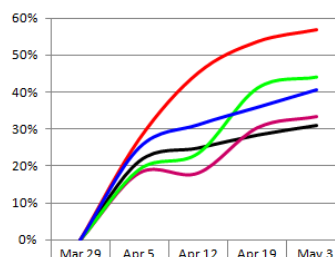
All NeoBio versions outperformed the competition, even proving to be superior in single dosage than other products in double dosage. NeoBio also has a longer shelf life and is easier to apply.



Left: sludge reduction ratio with tested products applied at single dosage, as per manufacturer's recommendation.

Right: sludge volume reduction ratio achieved with double the recommended dosage.

Conclusion: NeoBio is more efficient in single dosage than competing products in double dosage.



Product	Mar 29	Apr 5	Apr 12	Apr 19	May 3
EM A	0%	21.4%	25.0%	28.5%	31.1%
EM B	0%	18.1%	18.1%	30.3%	33.3%
NeoBio Septic	0%	19.1%	23.5%	41.1%	44.1%
NeoBio Septic +	0%	27.3%	45.2%	53.6%	56.8%
NeoBio Latrine	0%	25.0%	31.2%	35.9%	40.6%

All data and laboratory test results published in this document are provided by NGO Solidarités International, Maesot Camp, Thailand.



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