



BIO-ACT

BIO-ACT is a carefully selected, precisely balanced blend of several bacterial strains.

Key Characteristics Include:

- Strict and facultative properties able to thrive under anaerobic and aerobic conditions of up to 2ppm dissolved oxygen
- Live liquid form
- Capability of photo-lithotropic and photo-organotropic metabolism under anaerobic conditions
- Fixation of molecular nitrogen
- Motile via polar flagella
- Some members exhibit excellent growth at low (4°C) temperatures
- Growth over pH levels of 6.0 – 9.0
- Growth possible utilising sulphide as the sole electron donor
- Capability of oxidative metabolism without light under microaerophilic conditions
- Will utilise organic substances in the absence of hydrogen sulphide

N.B. References on individual applications are available, whilst other industrial wastes can be laboratory tested for suitability of treatment with BIO-ACT. BIO-ACT is non-toxic and non-pathogenic. It is harmless to aquatic life and compatible with other desirable bacteria in waste water. The product is authorised by the U.S. Department of Agriculture for applications within Federally Inspected meat, poultry and egg processing plants.

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Due to its continuous policy of research and development, the Company may alter product specifications without prior notification.

Firm Control of Odours from Raw Sewage Sludges During Disposal

North West Water Limited and Lancashire County Council

In a joint project between North West Water Limited and Lancashire County Council, raw sewage sludge produced from the primary settlement tanks of North West Water's Clifton Marsh Sewage Treatment Works, Preston is pumped to landfill storage/settlement lagoons located on the neighbouring Clifton Marsh waste disposal and landfill site.

Each settlement lagoon has an average volume of 100,000 cubic metres, and with an average sludge production rate from the sewage works of 15,000 cubic metres per month, each lagoon takes approximately 6 months to fill, settle and stabilise before it is capped with solid domestic refuse, ready for landscaping.

IMAGE TO BE INSERTED

Caption Text

The very nature of the raw sewage sludge being pumped and stored for these long periods has in the past given rise to odour emission problems and complaints from the neighbouring community.

However, ten months ago, in line with the council's plans to ensure as little nuisance as possible from waste disposal operations personnel at the Clifton Marsh site, lead by operational site manager, John Seddon embarked on a new, radical biological treatment of the odorous sludges.

continued overleaf >>>

IMAGE TO BE INSERTED

Caption Text

IMAGE TO BE INSERTED

Caption Text

After site surveys and technical consultations by Odour Control Systems Limited, Hawarden, Deeside it was decided to inoculate with OCS BIO-ACT.

OCS BIO-ACT is a complex blend of strict and facultative anaerobic bacteria manufactured by Odour Control Systems and the product is dosed and mixed with the sewage sludges as it is pumped into the lagoons.

The decomposition of domestic and industrial wastes is a complex biological process which requires countless bacterial actions and interactions over time to be achieved. Under the anaerobic conditions quickly created by the large volumes of raw sludges stored in the lagoons, the normally present bacteria soon start to produce odorous hydrogen sulphide and other sulphur based compounds, creating very high levels of odour nuisance.

The bacteria in OCS BIO-ACT utilise sulphide in their own metabolic process forming elemental sulphur which is then stored in their cell structures. This remarkable process results in dramatic reductions of sulphide and hence dramatic odour control.

Improved odour control has clearly been achieved at the Clifton Marsh site by this treatment – neighbouring community complaints have been reduced dramatically since treatment began.

Clifton Marsh Landfill Site is planned to operate beyond the year 2000 and it is hoped, due to this success treatment will continue well into the future.

Contact

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preserving the environment

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