



Steps  
Cripps Corner  
Staplecross  
East Sussex, TN32 5RY

Tel: 01580 831223  
Fax: 01279210127  
sales@goctechnologies.co.uk

## BAT Tests

The following tests were conducted by Purdue University in autumn (late October, early November), 2001. The results categorize the effectiveness of BAT 505 and BAT 506. They also indicate the effect of stress on biochemical surface activity in waste materials in the early morning. Although similar tests were not conducted in the evening, changes in humidity and temperature at this juncture would indicate the probability of similar stress during the transition from afternoon to evening. This may explain the high incidence of odour complaints occurring in the morning and early evening hours.

Ammonia and olfactometer tests were conducted by Dr. Jody Tishmack and Dr. Al Heber. Microbial tests were forwarded to an independent certified microbial laboratory.

Test materials consisted of fermented fish meal, leaves, dairy manure, and wood chips. Materials were allowed to decompose for 14 days prior to treatment and sample extraction.

## Ammonia in Parts Per Million

@ Surface to 2" below surface @ 36 hours after sample extraction

	NH <sub>3</sub> Treated w/ 505&506	NH <sub>3</sub> Untreated
A.M.	16	1569
Mid-day	12	506
Afternoon	21	245

## Bacteria and Actinomycete Counts

@ 2" below surface

	Aerobic	Aerobic	Facultative	Facultative	Actino- mycetes	Actino- mycetes
	<b>Treated 505&amp;506</b>	Untreated	<b>Treated 505&amp;506</b>	Untreated	<b>Treated 505&amp;506</b>	Untreated
A.M.	5.7E+10	6.0E+09	5.1E+09	4.1E+08	2.8E+07	1.0E+02
Mid-day	3.0E+10	3.3E+09	8.7E+09	1.5E+07	6.0E+04*	1.9E+06*

\*Unexplained Anomaly

## Olfactometer Readings in Odour Units \*

@ Surface

	<b>Treated 505&amp;506</b>	Untreated	<b>Treated 505&amp;506</b>	Untreated
A.M.	454	2972	354	3836
Mid-day	385	762	392	460
Afternoon	240	322	127	251

- AM readings were taken between 10:00 and 10:30 to allow the untreated pile some time for acclimation. Odours emanating from the untreated materials prior to 10:00 AM were even more intense. However, it was felt a more fair comparison was obtained by allowing the untreated materials some time for surface oxidation and reactivation of biological activity. During high stress hours when bio-activity was limited, chemical activity near the surface produced high volumes of **partially oxidized compounds**. Increased bio-chemical activity throughout the day resulted in more complete oxidations and less odour.