

TEST REPORT

DETERMINATION OF THE IMMEDIATE BIODEGRADABILITY BY THE MEASUREMENT OF CARBONE DIOXIDE RELEASED IN THE CLOSED B2- 031811.M SYSTEM

| Customer | DETEN QUIMICA S/A |
|---------------------------------------|--|
| Address | R HIDROGÊNIO, 1744 – COMPLEXO INDUSTRIAL 42810-000 |
| | CAMAÇARI - BA R |
| Ecolyzer Protocol: | 031811.M |
| Beginning of the Process: | 21 July 2015 |
| Sampling received on: | 21July 2015 |
| Beginning of the Test: | 07 August 2015 |
| End of the Test: | 04 September 2015 |
| Issue of the Report: | 01 October /2015 |
| Sampling: | Sampling number: 020/15 |
| Declared chemical composition: | Linear alkyl benzene sulfonic acid with c10-c13 carbon chain |
| Quantity of sample received (ml or g) | 770.00 |
| Lot/Val/Declared manufacture | STD-010215 24 June 2016 24 June 2015 |
| Quantity of sample received (ml or g) | 1 |

METHODOLOGY

The sample was incubated in amber flasks containing mineral and innocuous medium during 28 days. The readings were performed in pre-established days with the determination of CO_2 dissolved in barium oxide until the turning point. Negative controls were analyzed in parallel.

POP - LFQ 59.04 Test for the Determination of the Immediate Biodegradability Release - Closed System

TEST CONDITIONS

Incubation temperature: 24 - 25°C

Incubation time: 28 days.

ANALYTICAL TECHNIQUE

Titulometric Method

RESULTS

The sampling presented a biodegradability degree of 86,00%.



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ACCEPTANCE CRITERIA

The sample has to reach a minimum of biodegradability of 60% within 10 days after the initial biodegration.

The control using glycoses has to present a minimum of 60% of CO₂ theoretical release in a 10-day interval after reaching 10% of biodegradability.

The inhibition test has to reach a minimum release of 25% of CO2 within the same interval and conditions referring to the biodegradable control (glycoses).

The opinions and interpretations expressed below are not part of the accreditation scope of this laboratory.

The sample was considered easily biodegradable.

- The results refer solely and exclusively to the items that were tested.
- Sampling performed by the customer.
- The samples were analyzed as received, the laboratory being exempt from any responsibility referring to the procedures and data of sampling, preservation and issue of samples.
- This report complies with the requirements of NBR ISO/IEC 17025, which guarantees the traceability of the data generated during the test.
- The partial reproduction of this test is forbidden. The reproduction of parts require Ecolyzer's written approval.

Bibliography: OECD - Guideline for testing of Chemicals - 301B CO2 Evolution Test - Ready Biodegradability - 1992,CETESB -Project 83.04.00 *Desenvolvimento e Implementação de testes para avaliação da biodegradação e bioconcentração de agentes químicos* [Development and Implementation of Tests for the Evaluation of the Biodegration and Bioconcentration of Chemicals] São Paulo – Oct 1990

Juliana Brito Amaro Ornaghi Responsible Analyst CRQ 04491241 Region IV (Regional Board of Chemistry) Signature-signed Glaucio Pereira Machado Technical Manager CRMV-SP 20396 (Regional Board of Veterinary Medicine) Signature-signed