

## Evaluation Report for Category B, Subcategory 2.4, 3.12 Application

**Application Number:** 2017-1635  
**Application:** New End-Use Product Chemistry – Proportion of Formulants  
New Product Labels – New Site or Host  
**Product:** BIOC16779A  
**Registration Number:** 33141  
**Active ingredients (a.i.):** Hydrogen Peroxide, Peroxyacetic Acid  
**PMRA Document Number:** 2888927

### Purpose of Application

The purpose of this application was to register a new commercial slimicide for oil field uses.

### Chemistry Assessment

BIOC16779A is formulated as a solution containing hydrogen peroxide at a concentration of 3.65% and peroxyacetic acid at a concentration of 21.0%. This end-use product has a density of 1.112-1.113 g/mL and pH of 1.89. The required chemistry data for BIOC16779A have been provided, reviewed and found to be acceptable.

### Health Assessments

On the basis of the submitted acute data package, the end-use product is anticipated to be acutely corrosive to skin, eyes and mucosal membranes. The oral, dermal and inhalation toxicities are secondary to the corrosivity.

The occupational exposure to BIOC16779A is expected to be very low because the end-use product is applied through a closed loop system by automated process. Worker exposure is expected only during drum/tote changes or during spills. Due to the corrosive nature of BIOC16779A, it poses acute risk of severe eye, skin, and respiratory tract irritation to handlers. However, occupational exposure is not of concern if the precautionary statements and recommended personal protective equipment on the product label, which are intended to minimize worker exposure, are observed. Bystander exposure is not likely due to the nature of the use-sites and the method of application.

A dietary exposure assessment was not required for this application.

## **Environmental Assessment**

Concentrations of peroxyacetic acid and hydrogen peroxide as a result of use of BIOC16779A in waste fluids from use in oil and gas operations are expected to be low. Peroxyacetic acid and hydrogen peroxide are relatively unstable in water due to hydrolytic reactions, spontaneous degradation and potential microbial breakdown. Peroxyacetic acid and hydrogen peroxide are not expected to accumulate in organisms and will breakdown quickly in aquatic and terrestrial environments. The transformation products are not of toxicological concern to the environment. Peroxyacetic acid is toxic to aquatic organisms. Given that the rapid breakdown should result in limited exposure to the environment, risks of concern are not expected from the use of BIOC16779A in on-shore oil and gas field operations. Precautionary label statements informing users of the toxicity to aquatic organisms are required.

## **Value Assessment**

Laboratory trials evaluating biocide performance against acid-producing bacteria, sulphate-reducing bacteria and other common oilfield bacteria were provided for the fracturing fluid and water flooding uses in support of the use of BIOC16734A. Data was also provided demonstrating the ability of the biocide to treat established biofilm. The product was found to be effective in controlling slime-forming microorganisms at rates between 5 and 1000 ppm peroxyacetic acid. Use history information was provided to support the pipeline and tank maintenance use. Therefore, BIOC16734A has been found to have acceptable value as a biocide in pipeline maintenance, oilfield fracturing fluids and water flooding operations.

## **Conclusion**

The Pest Management Regulatory Agency has completed an assessment of the information provided and has found the information sufficient to support the registration of BIOC16779A.

## References

<b>PMRA Document Number</b>	<b>References</b>
2745093	2013, EX-6235 Chemical Characterization, DACO: 2.11.1, 2.11.2, 2.11.3, 2.11.4, 2.12.1, 2.13.1, 2.13.2, 2.13.3, 2.14.1, 2.14.10, 2.14.11, 2.14.13, 2.14.14, 2.14.15, 2.14.2, 2.14.3, 2.14.4, 2.14.5, 2.14.6, 2.14.7, 2.14.8, 2.14.9, 3.5.8, 3.5.9 CBI
2745095	2015, EX-6235 Long Term Storage Stability, DACO: 2.14.14, 3.5.14, 3.5.5 CBI
2745096	2013, EX-6235 Accelerated Storage Stability, DACO: 2.14.14 CBI
2746605	2017, Basic Information, DACO: 3.1, 3.1.1, 3.1.2, 3.1.3, 3.1.4 CBI
2745098	2017, Scientific Rationale to Bridge Requirements for EP BIOC16779A, DACO: 4.2.1
2745099	2017, Scientific Rationale to Waive Requirements for EP BIOC16779A, DACO: 4.2.3
2745100	2017, Scientific Rationale to Waive Requirements for EP BIOC16779A, DACO: 4.2.2, 4.2.4, 4.2.5, 4.2.6
2746606	2017, Use Description/Scenario (Application and Post Application), DACO: 5.2
2744310	2017, Scientific Rationale to Waive Requirements for TGAI Peroxyacetic Acid for Use Site 17, DACO: 8.2.2.1, 8.2.2.2, 8.2.3.5.6, 8.2.4.2
2744343	2015, Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products, DACO: 12.5.10
2744346	2008, SIDS Dossier, DACO: 12.5
2746608	2014, EX-6235 Antimicrobial Efficacy Against Bacillus cereus, Pseudomonas aeruginosa and Desulfovibrio desulfuricans, DACO: 10.2.3.2(F)
2746609	2014, Report Amendment - EX-6235 Antimicrobial Efficacy Against Bacillus cereus, Pseudomonas aeruginosa and Desulfovibrio desulfuricans, DACO: 10.2.3.2(F)
2746610	2014, California EC6779A Kil Study 5 ppm, 100 ppm, and 1000 ppm active peroxyacetic acid (POAA), DACO: 10.2.3.2(F)

## B. Additional Information Considered

### Published Information

2848309	Federal-Provincial-Territorial Committee on Drinking Water, 2015, Chromium in Drinking Water – Document for Public Consultation, DACO:4.8
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