

Person in charge Ms M. Rybak
Client support Ms M. Rybak

Report date 06.05.2022
Page 1/5

Analytical report AR-22-JR-011090-02
This report replaces report number: AR-22-JR-011090-01



Sample Code 799-2022-00008139

Reference	Beschreibung: COMPOSITION OF EPOXY AND HARDENER ECOAT SAMSON 22_0046
Client sample code	547-2022-00000257
Purchase order code	N°EUAB21-00000299
Lot-no.	N/A
Number of received Samples	8
Ordered by	Eurofins ERICo, d.o.o.
Submitted by	Eurofins ERICo, d.o.o.
Carrier	Bote
Reception date	15.03.2022
Start/end of analyses	30.03.2022 / 21.04.2022

TEST RESULTS

Preparation

JR01B Preparation sensory packaging materials and articles of daily use (#)

Method: DIN 10955:2004-06, PV 01453 2017-09, Preparation

Migration Type	Immersion	
Food simulant	Water	
Temperature	90	°C
Duration of experiment	1	Hours
surface volume ratio	2.3/500	dm ² /ml
Variation from test norm	No	

JR15E Migration in 50% Ethanol for liquid chromatographic analysis (#)

Method: DIN EN 13130-1:2004-08, PV 00574 2010-07, Preparation

Migration Type	Immersion	
Temperature	25	°C
Duration of experiment	1	Hours
surface volume ratio	1.15/200	dm ² /ml
Layer thickness	>= 0.5 mm	
Variation from test norm	No	

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JR15D Migration in water for liquid chromatographic analysis (#)

Method: DIN EN 13130-1:2004-08, PV 00574 2010-07, Preparation

Migration Type	Immersion	
Temperature	90	°C
Duration of experiment	1	Hours
surface volume ratio	1.15/200	dm ² /ml
Layer thickness	>= 0.5 mm	
Variation from test norm	No	

Specific migration**JR098 Specific migration of BADGE, BFDGE and NOGE in 50% ethanol (#)**

Method: DIN EN 13130-1:2004-08, PV 01140 2009-02, LC-MS/MS

Migration Type	Immersion	
Temperature	25	°C
Duration of experiment	1	h
Badge - Replicate 1	<60	* µg/kg food
Badge - Replicate 2	<60	* µg/kg food
Badge - Replicate 3	<60	* µg/kg food
Badge - mean value	<60	* µg/kg food
Bfdge - Replicate 1	<60	* µg/kg food
Bfdge - Replicate 2	<60	* µg/kg food
Bfdge - Replicate 3	<60	* µg/kg food
Bfdge - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 H2O - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 H2O - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 H2O - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 H2O - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * HCl - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * HCl - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * HCl - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * HCl - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 HCl - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 HCl - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 HCl - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 HCl - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O*HCl - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O*HCl - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O*HCl - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O*HCl - mean value	<60	* µg/kg food
NOGE - Replicate 1	<60	* µg/kg food
NOGE - Replicate 2	<60	* µg/kg food
NOGE - Replicate 3	<60	* µg/kg food
NOGE - mean value	<60	* µg/kg food
surface volume ratio	1.15/100	dm ² /ml
Layer thickness	>= 0.5 mm	
Variation from test norm	No	

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JR07V Specific migration of BADGE, BFDGE and NOGE in water (#)

Method: DIN EN 13130-1:2004-08, PV 01140 2009-02, LC-MS/MS

Migration Type	Immersion	
Temperature	90	°C
Duration of experiment	1	h
Badge - Replicate 1	<60	* µg/kg food
Badge - Replicate 2	<60	* µg/kg food
Badge - Replicate 3	<60	* µg/kg food
Badge - mean value	<60	* µg/kg food
Bfdge - Replicate 1	<60	* µg/kg food
Bfdge - Replicate 2	<60	* µg/kg food
Bfdge - Replicate 3	<60	* µg/kg food
Bfdge - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 H2O - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 H2O - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 H2O - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 H2O - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * HCl - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * HCl - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * HCl - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * HCl - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 HCl - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 HCl - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 HCl - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * 2 HCl - mean value	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O*HCl - Replicate 1	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O*HCl - Replicate 2	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O*HCl - Replicate 3	<60	* µg/kg food
Bisphenol-A-Diglycidether * H2O*HCl - mean value	<60	* µg/kg food
NOGE - Replicate 1	<60	* µg/kg food
NOGE - Replicate 2	<60	* µg/kg food
NOGE - Replicate 3	<60	* µg/kg food
NOGE - mean value	<60	* µg/kg food
surface volume ratio	1.15/200	dm ² /ml
Layer thickness	>= 0.5 mm	
Variation from test norm	No	

* = below indicated quantification level

= Eurofins Consumer Product Testing (Hamburg) is accredited for this test.

JUDGEMENT

English:

According to the regulation (EG) No 1895/2005 of the commission from 18th November 2005 concerning the restriction of the use of certain epoxy derivates in food contact materials, the following concentrations in foods resp. food simulant are permitted.

1. The sum of the migration value of the following substances:

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- a) BADGE [= 2,2-Bis(4-hydroxyphenyl)propane-bis-(2,3-epoxypropyl)aether] (CAS-No = 001675-54-3),
 b) BADGE.H₂O (CAS-No = 076002-91-0) and
 c) BADGE.2H₂O (CAS-No = 005581-32-8)
 must not exceed the following limits:
 - 9 mg/kg in foods or food simulants or

2. The sum of the migration value of the following substances:

- a) BADGE.HCl (CAS-No.=013836-48-1),
 b) BADGE.2HCl (CAS-No = 004809-35-2) and
 c) BADGE.2HCl (CAS-No = 227947-06-0)
 must not exceed the following limits:
 - 1 mg/kg in foods or food simulants or

According to Article 3 in the production of the mentioned materials BFDGE must not be used or present.
 According to Article 4 in the production of the mentioned materials NOGE must not be used or present.

Within the scope of the performed analysis there were no indications for an objection.
 Hence, in terms of the German LFGB (Food and Feed Code) there are no indications against the usage of the analysed product.

German:

Gemäß der Verordnung (EG) Nr. 1895/2005 der Kommission vom 18. November 2005 über die Beschränkung der Verwendung bestimmter Epoxyderivate in Materialien, die mit Lebensmitteln in Berührung kommen, sind folgende Konzentrationen in Lebensmitteln bzw. Lebensmittelsimulanzien zulässig.

1. Die Summe der Migrationswerte der folgenden Stoffe:

- a) BADGE [= 2,2-Bis(4-hydroxyphenyl)propan-bis-(2,3-epoxypropyl)aether] (CAS-Nr. = 001675-54-3),
 b) BADGE.H₂O (CAS-Nr. = 076002-91-0) und
 c) BADGE.2H₂O (CAS-Nr = 005581-32-8)
 dürfen die folgenden Grenzwerte nicht überschreiten:
 - 9 mg/kg in Lebensmitteln oder Lebensmittelsimulanzien oder

2. Die Summe der Migrationswerte der folgenden Stoffe:

- a) BADGE.HCl (CAS-Nr.=013836-48-1),
 b) BADGE.2HCl (CAS-Nr. = 004809-35-2) und
 c) BADGE.2HCl (CAS-Nr. = 227947-06-0)
 dürfen die folgenden Grenzwerte nicht überschreiten:
 - 1 mg/kg in Lebensmitteln oder Lebensmittelsimulanzien oder

Gemäß Artikel 3 darf bei der Herstellung der genannten Materialien BFDGE nicht verwendet werden oder vorhanden sein.

Gemäß Artikel 4 darf bei der Herstellung der genannten Stoffe kein NOGE verwendet werden oder vorhanden sein.

Im Rahmen der durchgeführten Analyse ergaben sich keine Anhaltspunkte für eine Beanstandung.

REMARK:

This test report replaces the previous version AR-22-JR-011090-01.
 The judgement has been added.

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Signature 

 Analytical Service Manager (Janina Welz)

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