

ACB LC RT-PCR Workflow System Kit

ACB Pre-cultivation Kit

ACB Isolation Kit

Alicyclobacillus detection and identification

Real-Time PCR Kit

SAFETY DATA SHEET

Version 7, November 2012

According to EC Directive 1272/2008-EK



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product information

Commercial Product Name: ACB LC RT-PCR Workflow System Kit

Cat. No.:	222-52-78-727-637-R1 (ACB 10-R1)	L222-52-78-727-637-R1 (ACB 10-R1-L)
	222-52-78-727-637-R2 (ACB 10-R2)	L222-52-78-727-637-R2 (ACB 10-R2-L)
	222-52-78-727-637-R3 (ACB 10-R3)	L222-52-78-727-637-R3 (ACB 10-R2-L)
	222-52-78-727-637-R4 (ACB 10-R4)	L222-52-78-727-637-R4 (ACB 10-R2-L)
	200-222-52-78-727-R1 (ACB 200-R1)	L200-222-52-78-727-R1 (ACB 200-R1-L)
	200-222-52-78-727-R2 (ACB 200-R2)	L200-222-52-78-727-R2 (ACB 200-R2-L)
	200-222-52-78-727-R3 (ACB 200-R3)	L200-222-52-78-727-R3 (ACB 200-R3-L)
	200-222-52-78-727-R4 (ACB 200-R4)	L200-222-52-78-727-R4 (ACB 200-R4-L)

Intended use: Laboratory use

Company: MMM Beverage Partner Kft.
Építők útja 2-4
2040 Budaörs, Hungary
Telephone: +36 23 428 896

www.mmmbeverage.hu

Emergency telephone numbers:

Austria: +43 1 40 400 4225
Belarus: +375 (0)17 201 9158
Belgium: +32 70 245 245
Bulgaria: +359 2 9154 409
Croatia: +385 1 234 8342
Czech Republic: +42 2 2491 9293
Denmark: +45 82 12 12 12
Finland: +358 9 471 977
France: +33 1 40 05 4848
Georgia: +995 99 533320
Germany: +49 30 19240
Greece: +30 10 779 3777
Hungary: +36 80 20 11 99
Iceland: +354 525 111
Ireland (Republic of): +353 1 8379964
Israel: +972 4 854 1900

Italy: +39 051 647 8955
Kazakhstan: +7 3252 571397
Latvia: +371 704 2468
Lithuania: +370 2 36 20 52
Netherlands: +31 30 274 8888
Norway: +47 22 591300
Poland: +48 22 619 66 54
Portugal: +351 21 330 3284
Romania: +40 21 230 8000
Russian Federation: +7 495 628 16 87
Slovakia: +421 2 54 77 4 166
Slovenia: + 386 41 650 500
Spain: +34 93 227 98 33
Sweden: +46 8 33 12 31
Switzerland: +41 44 251 51 51
Turkey: +90 0312 433 7001
United Kingdom: +44 (0)20 7188 0100

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Is to be classified according to EEC directive 67/548 and 1999/45 as hazardous.

Classification: Harmful
Highly flammable
Irritating
Dangerous for the environment

Warnings:

R11	Highly flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R32	Contact with acids liberates very toxic gas.
R36/37/38	Irritating to eyes, respiratory system and skin.
R41	Risk of serious damage to eyes.
R42/43	May cause sensitization by inhalation and skin contact.
R52/53	Harmful to aquatic organisms, may cause longterm adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.

Note: hazardous to water and ground

Is to be classified according to 1272/2008-EC directive.

Hazard pictograms:



Signal word: Danger, Warning

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H302+312+332	Harmful if swallowed, in contact with skin or if inhaled.
H412	Harmful to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Alicyclobacillus pre-cultivation media

Labeling: not required

Contains no hazardous substances in concentrations to be declared

***Alicyclobacillus* DNase buffer**

Labeling: not required

Contains no hazardous substances in concentrations to be declared

***Alicyclobacillus* DNase solution**

Labeling: Xn, Xi, R42 R43; S7, S22, S36/37/39

H317, H334; P261, P280, P272, P333+313, P284, P304+340

Ingredients: 100 % Nuclease, deoxyribo- CAS No.9003-98-9

Labeling: Xn, Xi, R42 R43; S7, S22, S36/37/39

H317, H334

***Alicyclobacillus* Lysis buffer**

Labeling: Xn, Xi, R23, R38/41, R41, R37/38; S26, S39

H318, H332, H315, H335; P280, P305+351+338, P312, P261, P304+340, P362

Ingredients: < 10 % Sodium N-Lauroylsarcosinate CAS No.137-16-6

Labeling: Xn, Xi, R23, R38/41

H330, H315, H318, P261, P264, P280, P304+340, P337+313

< 10 % SDS CAS No. 151-21-3

Labeling: Xi, R41, R37/38; S26, S39

H315, H318, H335, P280, P304+340+312, P305+351+338

Wash Buffer I

Labeling: Xn; R10-R22-R36/38; S7-S16-S26-S28-S36/39

H226, H302, H315, H319, P233, P210, P305+351+338; P280

Ingredients: 38 % Ethanol; CAS-No. 64-17-5

Labeling: F; R11; S7-S16

H225, P233, P210

> 25 % Guanidine Chloride; CAS-No. 50-01-1

Labeling: Xn; R22-R36/38; S22

H302, H332, H315, H319; P260

Wash Buffer II

Labeling: F; R11; S7-S16

H226, P233, P210, P280, P303+361+353, P370+380

Ingredients: 50 % Ethanol; CAS-No. 64-17-5

Labeling: F; R11; S7-S16

H225, P233, P210

Wash Buffer III

Labeling: not required

Contains no hazardous substances in concentrations to be declared

Lysis/Binding Buffer

Labeling: Xn; R20/21/22-R32-R41-R52/53; S13-S24-S26-S39-S61

H302, H332, H318, H412; P270, P261, P305+351+338, P280, P273

Ingredients: 20 % Triton X-100; CAS-No. 9036-19-5

Labeling: Xn; R22-R41; S24-S26-S39

H302, H318; P262, P305+351+338, P280,

> 25 % Guanidinium thiocyanate; CAS-No. 593-84-0

Labeling: Xn; R20/21/22-R32-R52/53; S13-S61

H302, H312, H332, EUH032; P301+312, P270, P273



Magnetic Glass Particles (MGPs) Suspension

Labeling: F, Xi; R11-R36-R67; S7-S16-S24/25-S26

H225, H319, H336; STOT SE 3, P233, P210, P262, P305+351+338, P280; P261, P271

Ingredients: 100 % Isopropanol; CAS-No. 67-63-0

Labeling: F, Xi; R11-R36-R67; S7-S16-S24/25-S26

H225, H319, H336; STOT SE 3, P233, P210, P262, P305+351+338

Elution Buffer

Labeling: not required

Contains no hazardous substances in concentrations to be declared

Magnetic Glass Particles Dilution (MGPD)

Labeling: F, Xi; R11-R36-R67; S7-S16-S24/25-S26

H225, H319, H336; STOT SE 3, P233, P210, P262, P305+351+338, P280; P261, P271

Ingredients: 100 % Isopropanol; CAS-No. 67-63-0

Labeling: F, Xi; R11-R36-R67; S7-S16-S24/25-S26

H225, H319, H336; STOT SE 3, P233, P210, P262, P305+351+338

***Alicyclobacillus* detection and identification Mix**

Labeling: not required

Contains no hazardous substances in concentrations to be declared

***Alicyclobacillus* positive control**

Labeling: not required

Contains no hazardous substances in concentrations to be declared

4. FIRST AID MEASURES

Skin contact:

Wash skin with water thoroughly.

Eye contact:

Promptly wash eyes with water for at least 15 minutes, seek medical advice.

Ingestion:

If accidentally swallowed obtain immediate medical attention.

Instructions for physician:

Symptomatic treatment by a physician.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

With dry powder, carbonic acid or foam extinguisher (Water is having a small efficiency factor).

Decomposition:

Heating leads to increase in pressure, danger of bursting and explosion.

6. ACCIDENTAL RELEASE MEASURES

Actions to be taken on spillage:

"Wash off small quantities with plenty of water. Absorb larger quantities of spilled substance with fluid binders and dispose of suitably. "

Absorbent material: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Actions to be taken to limit damage: Prevent discharge of the liquid into the sewage system, cess pits and cellars. Vapours produce potentially explosive atmosphere. If substance has entered a water course or sewer or contaminated soil, advise police or fire brigade.

7. HANDLING AND STORAGE

Handling: Take measures against electrostatic loading. Exhaust fumes at source.
Storage: Stable under recommended storage conditions, see instruction manual or label.
Do not store together with: Toxic and fire-promoting substances.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Wash Buffer I

Limit in air at workplace (ingredients)
Ethanol
TLV: 500 ppm

Wash Buffer II

Limit in air at workplace (ingredients)
Ethanol
TLV: 500 ppm

Magnetic Glass Particles (MGPs) Suspension

Limit in air at workplace (ingredients)
Isopropanol
TLV: 200 ppm

Magnetic Glass Particles Dilution (MGPD)

Limit in air at workplace (ingredients)
Isopropanol
TLV: 200 ppm

Personal protective equipment

Respiratory protection: Filter A only in the case of a given exposure.
Eye protection: Safety glasses
Hand protection: Protective gloves
Hygiene measures: Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

***Alicyclobacillus* pre-cultivation media**

Form: liquid
Miscibility with water: completely miscible
pH: 5.5-5.7
Flash point: not available

***Alicyclobacillus* DNase buffer**

Form: liquid
Miscibility with water: completely miscible

***Alicyclobacillus* DNase solution**

Form: liquid
Miscibility with water: completely miscible

***Alicyclobacillus* Lysis buffer**

Form: liquid
Miscibility with water: completely miscible
pH: 8,2
Flash point: not available

Wash Buffer I

Form: liquid
Miscibility with water: completely miscible
pH: 6,6
Flash point: > 27 °C

Wash Buffer II

Form: liquid
Miscibility with water: completely miscible
pH: 7,4
Flash point: 12 °C

Wash Buffer III

Form: liquid
Miscibility with water: completely miscible
pH: 4,0

Lysis/Binding Buffer

Form: liquid
Miscibility with water: completely miscible
pH: > 6,0
< 7,0

Magnetic Glass Particles (MGPs) Suspension

Form: liquid
Miscibility with water: completely miscible
Flash point: 12 °C

Elution Buffer

Form: liquid
Miscibility with water: completely miscible
pH: 8,0

Magnetic Glass Particles Dilution (MGPD)

Form: liquid
Miscibility with water: completely miscible
Flash point: 12 °C

***Alicyclobacillus* detection and identification Mix**

Form: liquid
Miscibility with water: completely miscible

***Alicyclobacillus* positive control**

Form: liquid
Miscibility with water: completely miscible

10. STABILITY AND REACTIVITY

Hazardous reactions: Vapour forms explosive mixture with air. Keep away from sources of ignition.

Hazardous decomposition products: Only in small concentrations

11. TOXICOLOGICAL INFORMATION

Wash Buffer I

Ethanol

Oral toxicity: LD50 rat 7.000 mg/kg
LD50 mouse 3.450 mg/kg
LD50 guinea pig 5.560 mg/kg
Toxicity (inhalation): LC50 rat 10 h 20000 ppm (10 h)
LC50 mouse 4 h 39 g/m³ (4 h)
Toxicity (skin contact): LD₅₀ rabbit > 20.000 mg/kg
Toxicity (others): LD50 intraperitoneal rat 3,6 mg/kg
LD50 intraperitoneal mouse 528 mg/kg
LD50 intravenous rat 1.440 mg/kg
LD50 intravenous mouse 1.973 mg/kg
LD50 subcutane mouse 8.285 mg/kg

Guanidine Chloride

Oral toxicity: LD50 rat 475 mg/kg
Toxicity (inhalation): LC50 rat 4 h 5,3 mg/l (4 h)
Toxicity (skin contact): LD50 lepre > 2.000 mg/kg
Toxicity (others): LD50 intraperitoneal mouse 500 mg/kg

Wash Buffer II

Ethanol

Oral toxicity: LD50 rat 7.000 mg/kg
LD50 mouse 3.450 mg/kg
LD50 guinea pig 5.560 mg/kg
Toxicity (inhalation): LC50 rat 10 h 20000 ppm (10 h)
LC50 mouse 4 h 39 g/m³ (4 h)
Toxicity (skin contact): LD₅₀ lepre > 20.000 mg/kg
Toxicity (others): LD50 intraperitoneal rat 3,6 mg/kg
LD50 intraperitoneal mouse 528 mg/kg
LD50 intravenous rat 1.440 mg/kg
LD50 intravenous mouse 1.973 mg/kg
LD50 subcutane mouse 8.285 mg/kg



Lysis/Binding Buffer

Triton X-100

Oral toxicity: LD50 rat 1.900 - 5.000 mg/kg
Toxicity (skin contact): LD50 lepre > 3.000 mg/kg

Guanidinium thiocyanate

Oral toxicity: LD50 rat 593 mg/kg
Toxicity (others): LD50 intraperitoneal mouse 300 mg/kg

Magnetic Glass Particles (MGPs) Suspension

Isopropanol

Oral toxicity: LD50 rat 5.000 mg/kg
LD50 mouse 3.600 mg/kg
LD50 lepre 6.410 mg/kg
Toxicity (inhalation): LC50 rat 8 h 16000 ppm (8 h)
LC50 mouse 53000 mg/m³
Toxicity (skin contact): LD50 lepre 12.800 mg/kg
Toxicity (others): LD50 intravenous rat 1.088 mg/kg
LD50 intravenous mouse 1.509 mg/kg
LD50 intravenous lepre 1.184 mg/kg
LD50 intraperitoneal rat 2.735 mg/kg
LD50 intraperitoneal mouse 4.477 mg/kg
LD50 intraperitoneal lepre 667 mg/kg

Magnetic Glass Particles Dilution (MGPD)

Isopropanol

Oral toxicity: LD50 rat 5.000 mg/kg
LD50 mouse 3.600 mg/kg
LD50 lepre 6.410 mg/kg
Toxicity (inhalation): LC50 rat 8 h 16000 ppm (8 h)
LC50 mouse 53000 mg/m³
Toxicity (skin contact): LD50 lepre 12.800 mg/kg
Toxicity (others): LD50 intravenous rat 1.088 mg/kg
LD50 intravenous mouse 1.509 mg/kg
LD50 intravenous lepre 1.184 mg/kg
LD50 intraperitoneal rat 2.735 mg/kg
LD50 intraperitoneal mouse 4.477 mg/kg
LD50 intraperitoneal lepre 667 mg/kg

Toxicological information for the product
Harmful substance/product.

12. ECOLOGICAL INFORMATION

Water hazard class: 2 hazardous to water and ground
Self-classification

Wash Buffer I

Ethanol

Toxicity to fish : LC50 Leuciscus idus 8.000 mg/l (48 h)
LC50 Rainbow trout (*Oncorhynchus mykiss*) 7.100 mg/l
Toxicity to algae : EC0 *Scenedesmus quadricauda* 5.000 mg/l (7 d)
Toxicity to bacteria: EC0 *Pseudomonas putida* 6.500 mg/l (16 h)
Toxicity to daphnia: EC50 *Daphnia magna* 5.400 mg/l (48 h)
Biodegradability: 97 % 28 d OECD 301 D Readily decomposed biologically.



Guanidine Chloride

Toxicity to fish : LC50 *Leuciscus idus* 1.759 mg/l (48 h)
Toxicity to bacteria: EC10 *Pseudomonas putida* 89 mg/l (18 h)
Value log P(o/w): <1,7
Biodegradability: < 70 % OECD Screening Test Poorly decomposed biologically.

Additional ecological information (ingredients):

Do not allow to get into waste water or surface water.

Wash Buffer II

Ethanol

Toxicity to fish : LC50 *Leuciscus idus* 8.000 mg/l (48 h)
LC50 Rainbow trout (*Oncorhynchus mykiss*) 7.100 mg/l
Toxicity to algae : EC0 *Scenedesmus quadricauda* 5.000 mg/l (7 d)
Toxicity to bacteria: EC0 *Pseudomonas putida* 6.500 mg/l (16 h)
Toxicity to daphnia: EC50 *Daphnia magna* 5.400 mg/l (48 h)
Biodegradability: 97 % 28 d OECD 301 D Readily decomposed biologically.

Lysis/Binding Buffer

Triton X-100

Toxicity to fish : LC50 *Pimephales promelas* 8,9 mg/l (4 d)
Toxicity to daphnia: EC50 *Daphnia magna* 26 mg/l (48 h)
Biodegradability: > 60 % OECD 301 B Readily decomposed biologically.

Additional ecological information (ingredients):

Do not allow to get into waste water or surface water.

Magnetic Glass Particles (MGPs) Suspension

Isopropanol

Toxicity to fish : LC0 Rainbow trout (*Oncorhynchus mykiss*) 10.000 mg/l
LC50 Rainbow trout (*Oncorhynchus mykiss*) 12.250 mg/l
LC100 Rainbow trout (*Oncorhynchus mykiss*) 15.000 mg/l
Toxicity to algae : EC0 *Scenedesmus quadricauda* 1.800 mg/l (7 d) OECD Test
Guideline 201, Paris, 1981
Toxicity to bacteria: EC0 *Pseudomonas putida* 1.050 mg/l (16 h)
Toxicity to daphnia: LC50 *Daphnia magna* 9.500 mg/l (24 h)
Value log P(o/w): 0,05
Biodegradability: 99 % 11 d OECD 302 B
57 % 5 d OECD 302 B

Magnetic Glass Particles Dilution (MGPD)

Isopropanol

Toxicity to fish : LC0 Rainbow trout (*Oncorhynchus mykiss*) 10.000 mg/l
LC50 Rainbow trout (*Oncorhynchus mykiss*) 12.250 mg/l
LC100 Rainbow trout (*Oncorhynchus mykiss*) 15.000 mg/l
Toxicity to algae : EC0 *Scenedesmus quadricauda* 1.800 mg/l (7 d) OECD Test
Guideline 201, Paris, 1981
Toxicity to bacteria: EC0 *Pseudomonas putida* 1.050 mg/l (16 h)
Toxicity to daphnia: LC50 *Daphnia magna* 9.500 mg/l (24 h)
Value log P(o/w): 0,05
Biodegradability: 99 % 11 d OECD 302 B
57 % 5 d OECD 302 B

13. DISPOSAL CONSIDERATIONS

Waste disposal route: Can be sent to an incineration plant in accordance with local regulations.

Disposal of empty packaging: Empty packaging can be disposed of via local recycling channels.



14. TRANSPORT INFORMATION

High Consequent Dangerous Goods: No

ADR

UN-No: 3316
Proper shipping name: Chemical kit
ADR/RID-Labels: 9
Packaging group: II
Classification code: (M11/II)
Limited Quantities:
Transportation Category 2

IMDG

UN-No: 3316
Proper shipping name: Chemical kit
ADR/RID-Labels: 9
Packaging group: II
EMS : F-AS-P

IATA / ICAO Cargo

UN-No: 3316
Proper shipping name: Chemical kit
ADR/RID-Labels: 9
Packaging group: II
Packing instruction: Y960
Limited Quantities 1 KG

IATA / ICAO Passenger

UN-No: 3316
Proper shipping name: Chemical kit
ADR/RID-Labels: 9
Packaging group: II
Packing instruction: Y960
Limited Quantities 1 KG

15. REGULATORY INFORMATION

Labeling according to EC-Directives

Note:	This product must be labeled in accordance with EC directive 1272/2008.	
Hazard symbol:	Xn	Harmful
	F	Highly flammable
Warnings:	R11	Highly flammable.
	R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
	R32	Contact with acids liberates very toxic gas.
	R36/37/38	Irritating to eyes, respiratory system and skin.
	R41	Risk of serious damage to eyes.
	R42/43	May cause sensitization by inhalation and skin contact.



R52/53	Harmful to aquatic organisms, may cause longterm adverse effects in the aquatic
R67	Vapours may cause drowsiness and dizziness environment.

Labeling according to EC-Directives 1272/2008

H225/H226	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318/H319	Causes serious eye damage/irritation.
H 332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H302/312/332	Harmful if swallowed, in contact with skin or if inhaled.
H412	Harmful to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.

Safety advice:

S7	Keep container tightly closed.
S13	Keep away from food, drink and animal feeding stuffs.
S16	Keep away from sources of ignition. – No smoking.
S22	Do not breathe dust.
S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

Labeling according to EC-Directives 1272/2008

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
P233	Keep container tightly closed.
P261	Avoid breathe dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, or in skin, or on clothing.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/clothing/eye protection / face protection.
P303+361+353	If on skin: take off immediately all contaminated clothing. Rinse skin with water / shower.
P304+340	In inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+351+338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a poison center if you feel unwell.

16. OTHER INFORMATION

Further information

The information herein is believed to be correct as of the date hereof but is provided without warranty of any kind. The recipient of our product is responsible for ensuring that, where applicable, existing laws and guidelines are observed.