

Analysis report DuraProof technologies GmbH - EPDM

Sample information

- **Reference:** DuraProof technologies GmbH – EPDM
- **ECCA reference:** E-17-020119
- **Date of receipt:** 31/05/2017

Experimental design

Two surfaces of 30 cm² are cut from the sample in a sterile manner. One part is immersed in 1L of rainwater for chemical analysis, while the other part is immersed in 1L of ultrapure water for microbiological analysis. The analysis is carried out on the water phase after being in contact for 24h with the EPDM samples. For both rainwater and ultrapure water, blank samples are analyzed without being in contact with the EPDM surfaces for comparison.

Analysis

Parameter	Method	Norm	Accreditation (Q) Recognition (E)
Coliforms at 30°C	Membrane filtration	ISO 9308-1 - WAC/V/A/002	Q-E
Escherichia Coli	Membrane filtration	ISO 9308-1 - WAC/V/A/002	Q-E
Total viable count at 22°C (aerobic)	Membrane filtration	ISO 6222 - WAC/V/A/001	Q-E
Conductivity 25°C	Conductivity	WAC/III/A/004 - NBEN 27888	Q-E
Acidity 25°C	pH-electrode	WAC/III/A/005 - ISO 10523	Q-E
Total oxidized nitrogen (TON)	Discrete analyzer	ISO 15923-1 - WAC/III/C/002	Q-E
Nitrite nitrogen	Discrete analyzer	ISO 15923-1 - WAC/III/C/002	Q-E
Nitrate nitrogen	Calculation		Q-E
Calcium (Ca)	ICP-AES	WAC/III/B/010 - ISO 11885	Q-E
Magnesium (Mg)	ICP-AES	WAC/III/B/010 - ISO 11885	Q-E
Hardness	Calculation		Q-E
Iron (Fe)	ICP-MS	NEN-EN-ISO 17294/1,2 - WAC/III/B/011	Q-E
Manganese (Mn)	ICP-MS	NEN-EN-ISO 17294/1,2 - WAC/III/B/011	Q-E

Results

Microbiological analysis

Parameter	Blank	Sample	Unit
Sample	Ultrapure water	EPDM in ultrapure water	
ECCA reference	E-17-020119/01	E-17-020119/02	
Coliforms at 30°C	< 1	< 1	cfe/100ml
Escherichia Coli	< 1	< 1	cfe/100ml
Total viable count at 22°C (aerobic)	< 10	210	cfe/ml

Chemical analysis

Parameter	Blank	Sample	Unit
Sample	Rainwater	EPDM in rainwater	
ECCA reference	E-17-020119/03	E-17-020119/04	
Conductivity 25°C	84	84	µS/cm
Acidity 25°C	7.1	7.3	-
Total oxidized nitrogen (TON)	1.88	1.89	mg N /L
Nitrite nitrogen	< 0.01	< 0.01	mg N /L
Nitrate nitrogen	1.88	1.89	mg N /L
Calcium (Ca)	13.6	14.1	mg/L
Magnesium (Mg)	0.512	0.513	mg/L
Hardness	3.61	3.73	°F
Iron (Fe)	< 20	47	µg/L
Manganese (Mn)	6.25	6.60	µg/L

Evaluation

There are no significant differences in chemical parameters between the rainwater and the rainwater in contact for 24h with the sample “DuraProof technologies GmbH – EPDM”. Contacting the sample with ultrapure water does not give rise to growth of coliforms or E. coli. A negligible amount of total viable count is probably due to skin contacting the EPDM sample.

Analysis carried out by Laboratorium ECCA demonstrates that the sample does not have any significant chemical or microbiological influence on the water it is in contact with.