

Antwerp, 20 June 2001

Quality check of materials in contact with drinking water

Report number:	AWW/Hydrocheck 108/2
Belgaqua reference:	BELG 108/2
Material:	Leakinject UNI 6816
Applicant:	TRADECC Terbekehofdreef 50-52 2610 Wilrijk
Producer:	TRADECC Terbekehofdreef 50-52 2610 Wilrijk
Samples received:	20 February 2001
Form of samples:	cylindrical rods
Tests started:	13 April 2001
Tests completed:	15 June 2001
Test method:	HYDROCHECK Methods and requirements for the chemical, organoleptic and bacteriological investigation of organic materials in contact with drinking water and water used to prepare drinking water.
Test laboratory:	Antwerpse Waterwerken Mechelsesteenweg 64 2018 Antwerp Tel. 03/2440500 Fax 03/2440599 VAT BE 204.923.881 Water Quality Department

1. Organoleptic check, check of total migration and of specific migration of organic substances

1.1. Test conditions for organoleptic check and check of total migration

Surface/volume ratio: 1.5 dm²/l

Simulation liquid: Solution of 420 mg/l NaHCO₃ and 1 mg/l of free chlorine per litre of Milli Q water

Temperature: Ambient temperature ($\pm 22^{\circ}\text{C}$)

Duration: Three times twenty-four hours, with renewal of simulation liquid after 24 and 48 hours

After the contact period had been completed, the residual free chlorine in the test and control samples was removed by adding of an equivalent quantity of sodium thiosulphate

1.2 Analysis methods used

TOC: AWW/451

Colour: AWW/470

Turbidity: AWW/11

Odour: AWW/122

Taste: AWW/120

1.3 Results

The results indicated are values measured in comparison with the controls

PARAMETER	UNIT	24 HRS	48 HRS	72 HRS	HYDROCHECK REQUIREMENT
TOC	mg/l C	< 0.6	2.7	0.5	≤ 3
Colour	mg Pt/l	5	<5	5	≤ 5
Turbidity	NTU	0.14	0.39	0.25	≤ 1

The odour figure for the third contact liquid was <1 (Hydrocheck requirement: ≤ 6).

The contact liquid was not characterised by any odour or taste in comparison with the control.

1.4 Specific migration results

It was clear from the composition that the specific migration of two organic components needed to be checked: dibutylphthalate (3 mg/kg) and alkylamines (2 mg/kg).

The check was conducted by means of a TOC measurement. The measured values compared with the control are well below the migration limits.

2. Bacterial growth stimulation check

2.1 Test conditions

Surface/volume ratio: 1 dm²/l

Bacterial inoculum: Surface water

Dilution water: Chlorine-free tap water with a colonisation figure < 10/ml at 22 and 37°C

Duration: 12*3 days

2.2 Analysis methods used

Colonisation figure 22°C: AWW/170

Colonisation figure 37°C: AWW/170

Coliforms: AWW/180

2.3 Results

The results are presented in the relative form control/test/

Sample	Col. 22°C (n/ml)	Col. 37°C (n/ml)	Coliforms (n/100ml)
1.	2288/>5000	660/>5000	12/6
2.	2240/2600	2128/>5000	0/1
3.	37760/94240	23120/10240	0/0
4.	3600/153600	400/43200	0/0
5.	704000/112000	0/800	
6.	139200/78000	29600/32800	
7.	52800/49600	6600/8000	
8.	2600/54000	0/48000	
9.	87200/264000	10/40400	
10.	2000/20000	5600/29000	
11.	19000/75600	10/78400	
12.	130400/275200	10/36000	

2.4 Conclusion regarding bacteriological growth stimulation

In some of the measurements, a test/control ratio of greater than 10:1 was observed twice in succession. In no case did this occur three times in succession.

In some of the measurements, it was found that the control water exhibited high colonisation figures, pointing to the growth-stimulating properties of the control water.

3. General conclusion

The product in question, Leakinject UNI 6816 produced by TRADECC, complies with Hydrocheck requirements.

This report contains 4 pages (numbered 1 to 4), and may not be copied other than its entirety without written permission from the Water Quality Department.
The analysis results indicated in this report relate exclusively to the analysed samples.

{signature}

Dr F. van Hoof (on behalf of Belgaqua)