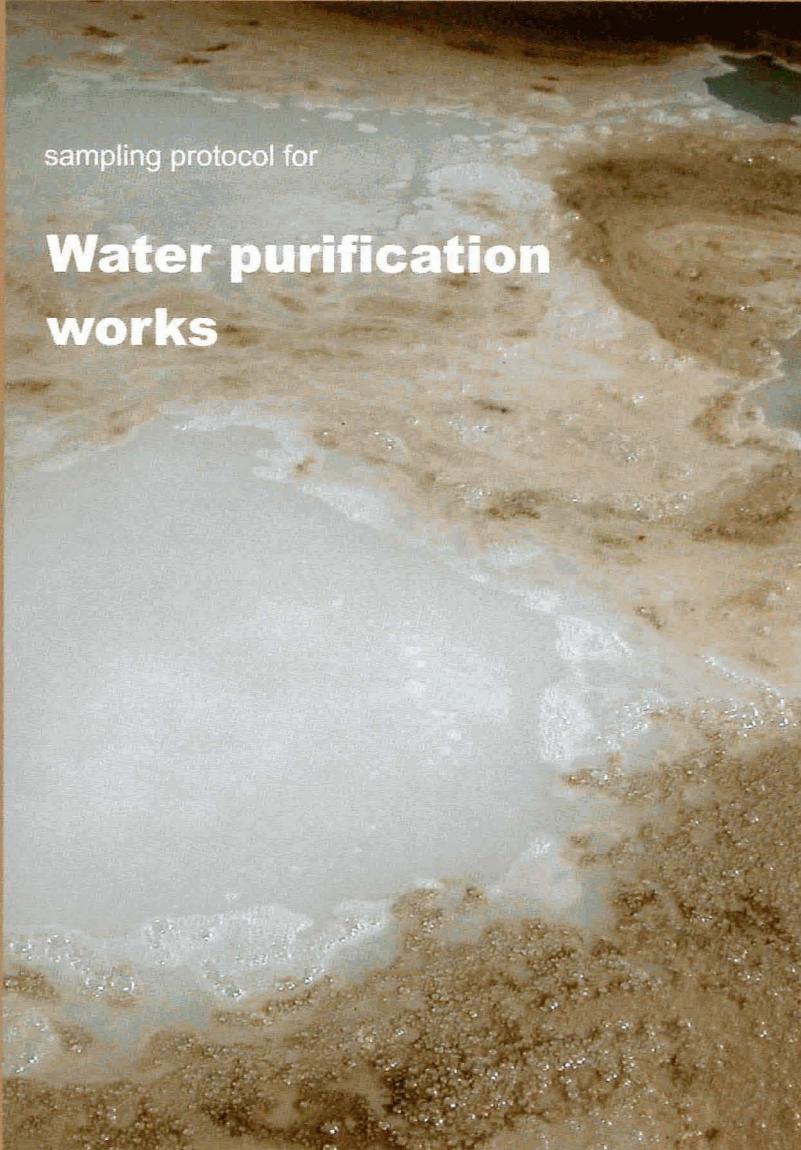


**Water
Resource
Quality
Monitoring**

VOLUME 6

sampling protocol for

**Water purification
works**



September 2004

the dwaf

DEPARTMENT OF WATER AFFAIRS AND FORESTRY
www.dwaf.gov.za



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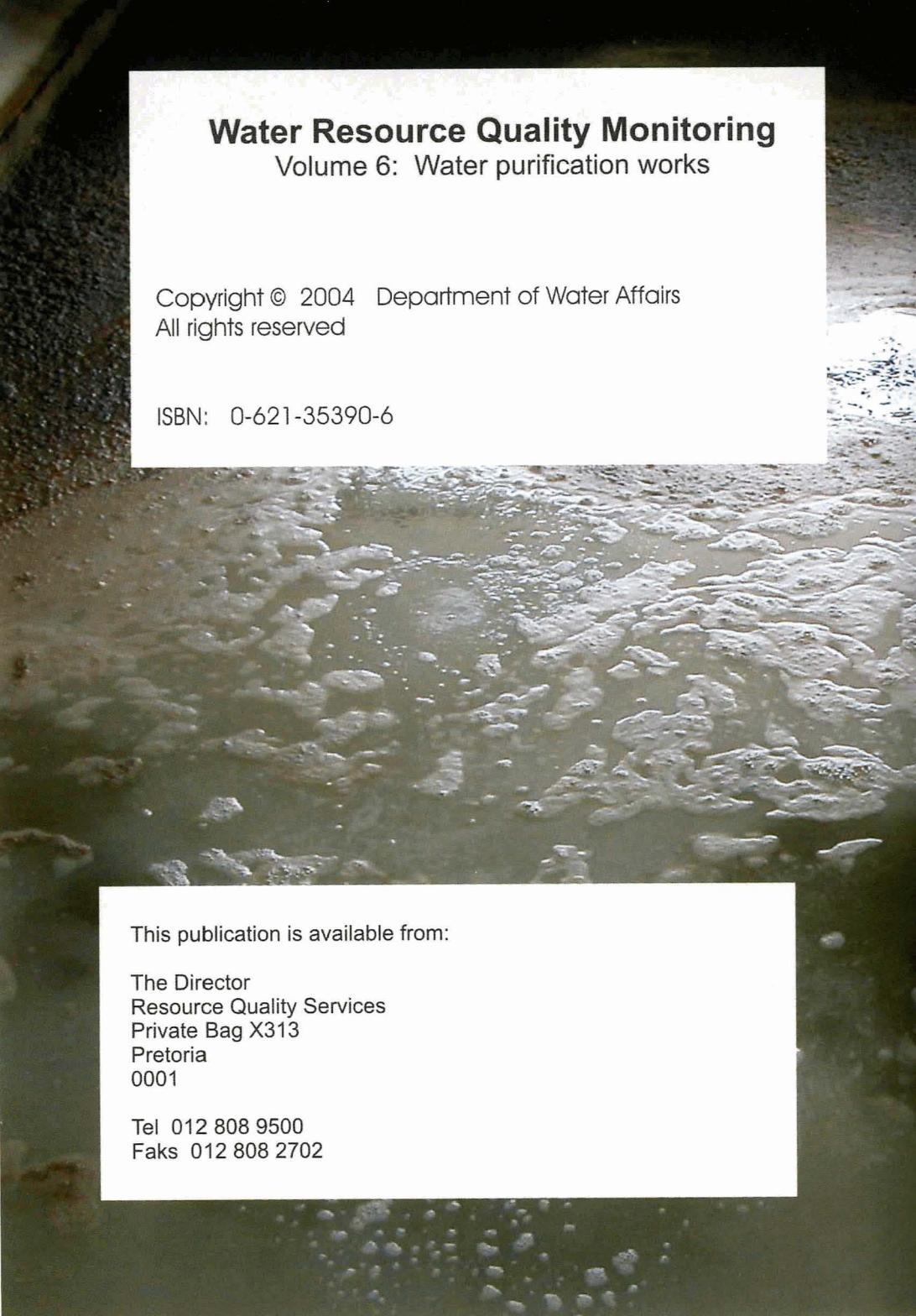
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Resource Quality Services
Department of Water Affairs

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Water Resource Quality Monitoring

Volume 6: Water purification works

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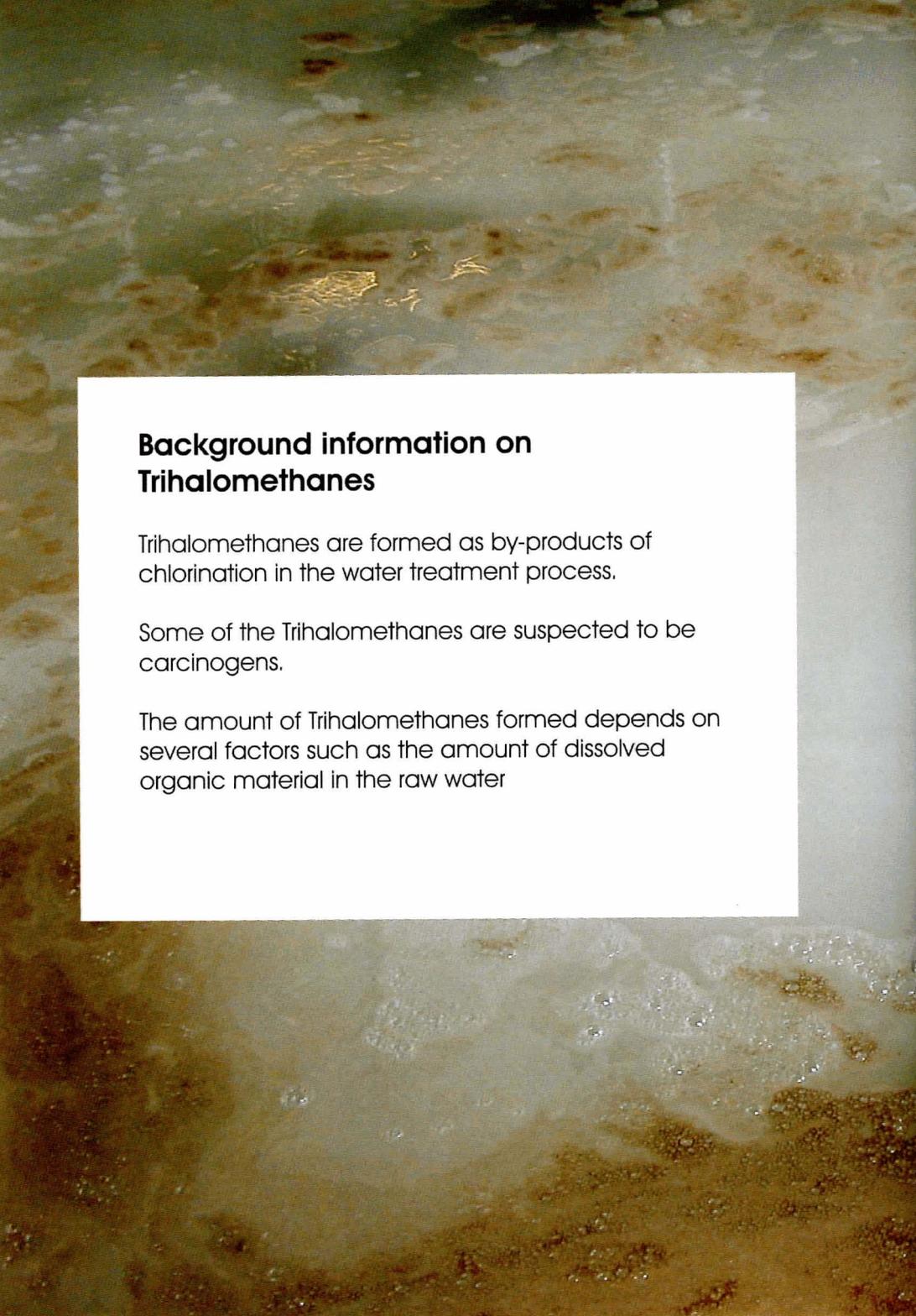
Hanlie Badenhorst - sampling protocol

Brendan Hohls - editing

Alfred Seloana - sampling techniques

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Background information on Trihalomethanes

Trihalomethanes are formed as by-products of chlorination in the water treatment process.

Some of the Trihalomethanes are suspected to be carcinogens.

The amount of Trihalomethanes formed depends on several factors such as the amount of dissolved organic material in the raw water

WATER PURIFICATION WORKS

Contents	Page
Background information on Trihalomethanes	
1.0 The sample bottles	2
2.0 Samples to be collected	
2.1 Samples from raw water	4
2.2 Samples from final water	5
3.0 Sampling procedure	6

1.0 THE SAMPLE BOTTLES

Each sampler will receive a cardboard box containing 4 glass bottles and tags



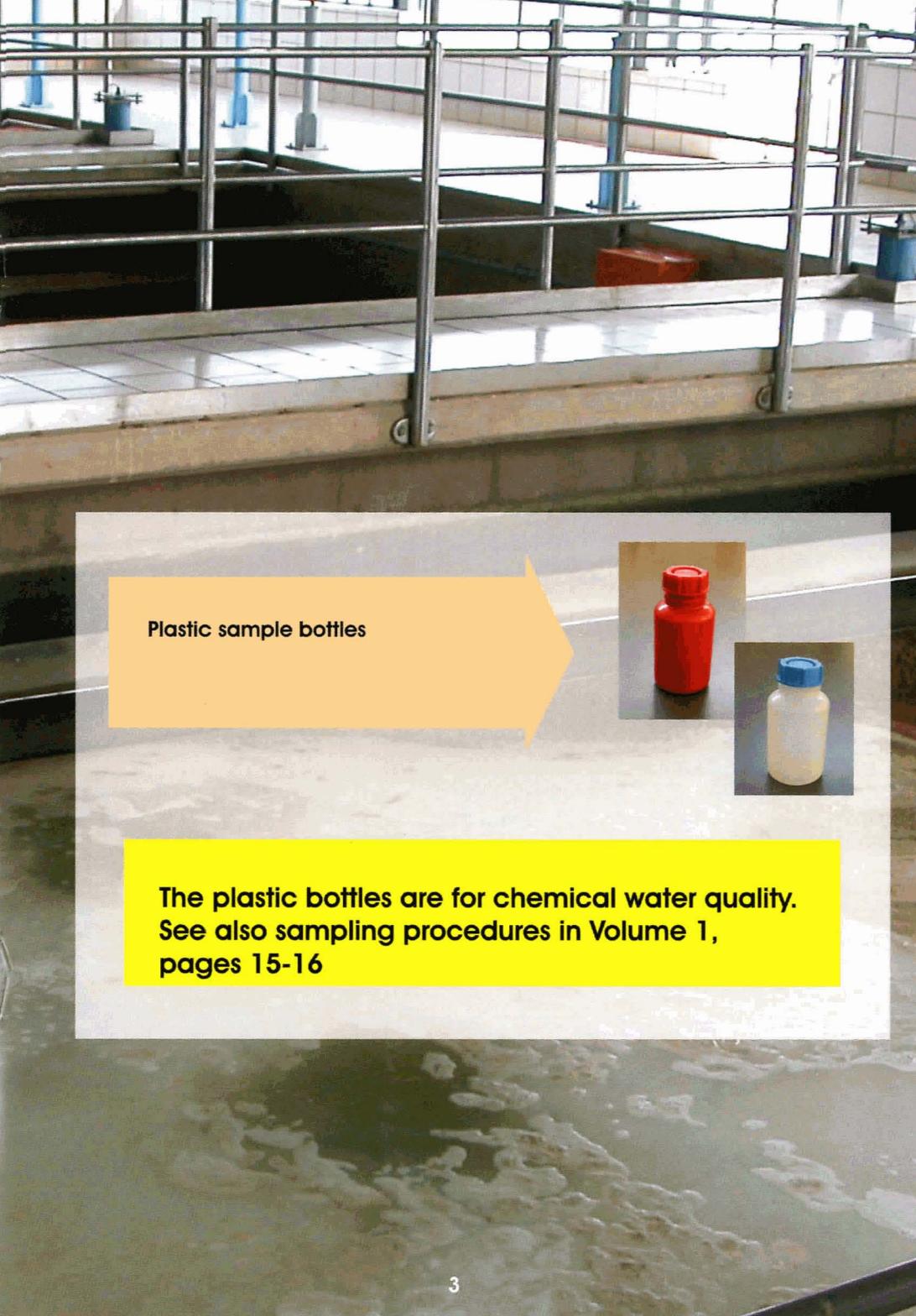
Three of the sample bottles are empty



NB!

The fourth bottle contains 0.2 mg L-ascorbic acid crystals





Plastic sample bottles



The plastic bottles are for chemical water quality.
See also sampling procedures in Volume 1,
pages 15-16

2.0 SAMPLES TO BE COLLECTED

2.1 From raw water

DOC
Dissolved Organic Carbon



TOC
Total Dissolved Carbon

**Formation
potential**



Macro sample



**Trace metal
sample**



2.2 From final water

Formation potential



Instantaneous



NB!

Macro sample



Trace metal sample



3.0 SAMPLING PROCEDURE

Collect water from the raw water source.



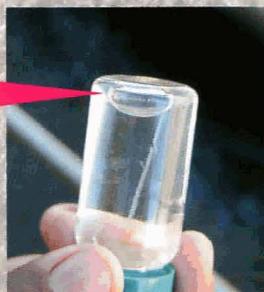
Fill 2 bottles with raw water.



Use water flowing slowly and fill bottles until the meniscus is visible. Close lids carefully.



No air bubbles should be present in the sample. Hold bottle upside down to see whether the bottle is leaking. Top up and tighten the lid if necessary.



Fill the other two bottles with final water. Collect sample just after chlorination point.

Make sure not to lose any ascorbic acid from the "final- instantaneous" sample



Photograph B. Hohls

Make sure that bottles carry the correct tags as supplied by RQS



Place bottles back into original container and proceed to the post office as soon as possible



Samples should be dispatched immediately or as soon as possible. A courier service works best.

Until such time the samples can be stored in the refrigerator at 4°C

Do not store for more than 24 hours

