# Test Report

XMF24-0010745-01 **Date:** 2025-02-12

| | |
|---|---|
| Sample Name: | ACF Bottle Filter |
| Sample Batch No.: | 2024.10.15 |
| Production Date: | 2024.10.15 |
| Manufacturer: | |

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Above information and sample(s) was/were submitted and certified by the client, SGS quoted the information with no responsibility as to the accuracy, adequacy and/or completeness.

| | |
|---|---|
| Date of Sample Received: | 2024-10-25 |
| Testing Period: | 2024-10-25 ~ 2025-01-14 |
| Test Requested: | Select test(s) as requested by the client. |
| Test Method(s): | Please refer to next page(s). |
| Test Results(s): | Please refer to next page(s). |

SGS Approved Signatory

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XMF24-0010745-01

Verification:
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# Test Report

XMF24-0010745-01 **Date:** 2025-02-12

**Sample Description:**

| Sample No. | SGS Sample ID | Description |
|---|---|---|
| 1 | XMF24-0010745-0001 | ACF Bottle Filter |

**Test requested:**
Selected test(s) as requested by applicant: Test the Removal rate of Diethyltoluamide, Metolachlor, Atenolol, carbamazepine, Linuron, Trimethoprim (TMP), Tris(2-chloroethyl) Phosphate (TCEP), Tris(1-chloro-2-propyl) Phosphate (TCPP), Nonyl Phenol (NP), Bisphenol A (BPA), Ibuprofen, Estrone, Naproxen, phenytoin at the start-up, 75 L, 151 L, 227 L, 302 L of the service life.

**Test method(s):**
Diethyltoluamide, Metolachlor, Atenolol, carbamazepine, Linuron, Trimethoprim (TMP), Tris(2-chloroethyl) Phosphate (TCEP), Tris(1-chloro-2-propyl) Phosphate (TCPP), Nonyl Phenol (NP), Bisphenol A (BPA), Ibuprofen, Estrone, Naproxen, phenytoin Challenge Testing: Refer to NSF/ANSI Standard 401 – 2022 Drinking Water Treatment Units - Emerging Compounds / Incidental Contaminants,
Diethyltoluamide, Metolachlor, Atenolol, carbamazepine, Linuron, Trimethoprim (TMP), Tris(2-chloroethyl) Phosphate (TCEP), Tris(1-chloro-2-propyl) Phosphate (TCPP), Nonyl Phenol (NP), Bisphenol A (BPA), Ibuprofen, Estrone, Naproxen, phenytoin: SGS Inhouse Method.

**Test Result(s):**
1. Group 1

| Testing Point | Test item(s) | Unit(s) | Test Method(s) | Test result(s) | | *Reduction (%) | Maximum Effluent Concen-tration (NSF 401) |
|---|---|---|---|---|---|---|---|
| | | | | Influent spiked water | Effluent filtrated water | | |
| Start-up | Diethyltoluamide | µg/L | SGS Inhouse Method | 1.397 | <0.2 | >85.6 | <0.2 |
| 75 L | Diethyltoluamide | µg/L | SGS Inhouse Method | 1.394 | <0.2 | >85.6 | <0.2 |
| 151 L | Diethyltoluamide | µg/L | SGS Inhouse Method | 1.419 | <0.2 | >85.9 | <0.2 |
| 227 L | Diethyltoluamide | µg/L | SGS Inhouse Method | 1.471 | <0.2 | >86.4 | <0.2 |
| 302 L | Diethyltoluamide | µg/L | SGS Inhouse Method | 1.471 | <0.2 | >86.4 | <0.2 |
| Start-up | Metolachlor | µg/L | SGS Inhouse Method | 1.565 | <0.2 | >87.2 | <0.2 |
| 75 L | Metolachlor | µg/L | SGS Inhouse Method | 1.524 | <0.2 | >86.8 | <0.2 |
| 151 L | Metolachlor | µg/L | SGS Inhouse Method | 1.488 | <0.2 | >86.5 | <0.2 |
| 227 L | Metolachlor | µg/L | SGS Inhouse Method | 1.588 | <0.2 | >87.4 | <0.2 |
| 302 L | Metolachlor | µg/L | SGS Inhouse Method | 1.588 | <0.2 | >87.4 | <0.2 |



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| Testing Point | Test item(s) | Unit(s) | Test Method(s) | Test result(s) | | *Reduction (%) | Maximum Effluent Concen-tration (NSF 401) |
|---|---|---|---|---|---|---|---|
| | | | | Influent spiked water | Effluent filtrated water | | |
| Start-up | Atenolol | µg/L | SGS Inhouse Method | 0.142 | <0.03 | >78.8 | <0.03 |
| 75 L | Atenolol | µg/L | SGS Inhouse Method | 0.142 | <0.03 | >78.8 | <0.03 |
| 151 L | Atenolol | µg/L | SGS Inhouse Method | 0.144 | <0.03 | >79.1 | <0.03 |
| 227 L | Atenolol | µg/L | SGS Inhouse Method | 0.158 | <0.03 | >81.0 | <0.03 |
| 302 L | Atenolol | µg/L | SGS Inhouse Method | 0.158 | <0.03 | >81.0 | <0.03 |
| Start-up | carbamazepine | µg/L | SGS Inhouse Method | 1.378 | <0.2 | >85.4 | <0.2 |
| 75 L | carbamazepine | µg/L | SGS Inhouse Method | 1.380 | <0.2 | >85.5 | <0.2 |
| 151 L | carbamazepine | µg/L | SGS Inhouse Method | 1.427 | <0.2 | >85.9 | <0.2 |
| 227 L | carbamazepine | µg/L | SGS Inhouse Method | 1.494 | <0.2 | >86.6 | <0.2 |
| 302 L | carbamazepine | µg/L | SGS Inhouse Method | 1.494 | <0.2 | >86.6 | <0.2 |
| Start-up | Linuron | µg/L | SGS Inhouse Method | 0.148 | <0.02 | >86.4 | <0.02 |
| 75 L | Linuron | µg/L | SGS Inhouse Method | 0.134 | <0.02 | >85.0 | <0.02 |
| 151 L | Linuron | µg/L | SGS Inhouse Method | 0.138 | <0.02 | >85.5 | <0.02 |
| 227 L | Linuron | µg/L | SGS Inhouse Method | 0.146 | <0.02 | >86.3 | <0.02 |
| 302 L | Linuron | µg/L | SGS Inhouse Method | 0.146 | <0.02 | >86.3 | <0.02 |
| Start-up | Trimethoprim (TMP) | µg/L | SGS Inhouse Method | 0.104 | <0.02 | >80.7 | <0.02 |
| 75 L | Trimethoprim (TMP) | µg/L | SGS Inhouse Method | 0.104 | <0.02 | >80.7 | <0.02 |
| 151 L | Trimethoprim (TMP) | µg/L | SGS Inhouse Method | 0.106 | <0.02 | >81.1 | <0.02 |
| 227 L | Trimethoprim (TMP) | µg/L | SGS Inhouse Method | 0.103 | <0.02 | >80.5 | <0.02 |
| 302 L | Trimethoprim (TMP) | µg/L | SGS Inhouse Method | 0.196 | <0.02 | >89.7 | <0.02 |



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# Test Report

XMF24-0010745-01 **Date:** 2025-02-12

2. Group 2

| Testing Point | Test item(s) | Unit(s) | Test Method(s) | Test result(s) | | *Reduction (%) | Maximum Effluent Concen-tration (NSF 401) |
|---|---|---|---|---|---|---|---|
| | | | | Influent spiked water | Effluent filtrated water | | |
| Start-up | Tris(2-chloroethyl) Phosphate (TCEP) | µg/L | SGS Inhouse Method | 4.988 | <0.7 | >85.9 | <0.7 |
| 75 L | Tris(2-chloroethyl) Phosphate (TCEP) | µg/L | SGS Inhouse Method | 5.040 | <0.7 | >86.1 | <0.7 |
| 151 L | Tris(2-chloroethyl) Phosphate (TCEP) | µg/L | SGS Inhouse Method | 5.116 | <0.7 | >86.3 | <0.7 |
| 227 L | Tris(2-chloroethyl) Phosphate (TCEP) | µg/L | SGS Inhouse Method | 5.031 | <0.7 | >86.0 | <0.7 |
| 302 L | Tris(2-chloroethyl) Phosphate (TCEP) | µg/L | SGS Inhouse Method | 5.037 | <0.7 | >86.1 | <0.7 |
| Start-up | Tris(1-chloro-2-propyl) Phosphate (TCPP) | µg/L | SGS Inhouse Method | 4.750 | <0.7 | >85.2 | <0.7 |
| 75 L | Tris(1-chloro-2-propyl) Phosphate (TCPP) | µg/L | SGS Inhouse Method | 4.786 | <0.7 | >85.3 | <0.7 |
| 151 L | Tris(1-chloro-2-propyl) Phosphate (TCPP) | µg/L | SGS Inhouse Method | 4.660 | <0.7 | >84.9 | <0.7 |
| 227 L | Tris(1-chloro-2-propyl) Phosphate (TCPP) | µg/L | SGS Inhouse Method | 4.848 | <0.7 | >85.5 | <0.7 |
| 302 L | Tris(1-chloro-2-propyl) Phosphate (TCPP) | µg/L | SGS Inhouse Method | 4.726 | <0.7 | >85.1 | <0.7 |

3. Group 3

| Testing Point | Test item(s) | Unit(s) | Test Method(s) | Test result(s) | | *Reduction (%) | Maximum Effluent Concen-tration (NSF 401) |
|---|---|---|---|---|---|---|---|
| | | | | Influent spiked water | Effluent filtrated water | | |
| Start-up | Nonyl Phenol (NP) | µg/L | SGS Inhouse Method | 1.342 | <0.2 | >85.0 | <0.2 |
| 75 L | Nonyl Phenol (NP) | µg/L | SGS Inhouse Method | 1.117 | <0.2 | >82.0 | <0.2 |
| 151 L | Nonyl Phenol (NP) | µg/L | SGS Inhouse Method | 1.498 | <0.2 | >86.6 | <0.2 |
| 227 L | Nonyl Phenol (NP) | µg/L | SGS Inhouse Method | 1.538 | <0.2 | >86.9 | <0.2 |
| 302 L | Nonyl Phenol (NP) | µg/L | SGS Inhouse Method | 1.370 | <0.2 | >85.4 | <0.2 |
| Start-up | Bisphenol A(BPA) | µg/L | SGS Inhouse Method | 2.204 | <0.3 | >86.3 | <0.3 |
| 75 L | Bisphenol A(BPA) | µg/L | SGS Inhouse Method | 1.825 | <0.3 | >83.5 | <0.3 |



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# Test Report

XMF24-0010745-01 **Date:** 2025-02-12

| Testing Point | Test item(s) | Unit(s) | Test Method(s) | Test result(s) | | *Reduction (%) | Maximum Effluent Concen-tration (NSF 401) |
|---|---|---|---|---|---|---|---|
| | | | | Influent spiked water | Effluent filtrated water | | |
| 151 L | Bisphenol A(BPA) | µg/L | SGS Inhouse Method | 2.603 | <0.3 | >88.4 | <0.3 |
| 227 L | Bisphenol A(BPA) | µg/L | SGS Inhouse Method | 2.562 | <0.3 | >88.2 | <0.3 |
| 302 L | Bisphenol A(BPA) | µg/L | SGS Inhouse Method | 2.393 | <0.3 | >87.4 | <0.3 |
| Start-up | Ibuprofen | µg/L | SGS Inhouse Method | 0.31 | <0.06 | >80.7 | <0.06 |
| 75 L | Ibuprofen | µg/L | SGS Inhouse Method | 0.24 | <0.06 | >74.8 | <0.06 |
| 151 L | Ibuprofen | µg/L | SGS Inhouse Method | 0.25 | <0.06 | >76.2 | <0.06 |
| 227 L | Ibuprofen | µg/L | SGS Inhouse Method | 0.27 | <0.06 | >77.8 | <0.06 |
| 302 L | Ibuprofen | µg/L | SGS Inhouse Method | 0.25 | <0.06 | >76.3 | <0.06 |
| Start-up | Estrone | µg/L | SGS Inhouse Method | 0.359 | <0.02 | >94.4 | <0.02 |
| 75 L | Estrone | µg/L | SGS Inhouse Method | 0.135 | <0.02 | >85.1 | <0.02 |
| 151 L | Estrone | µg/L | SGS Inhouse Method | 0.245 | <0.02 | >91.8 | <0.02 |
| 227 L | Estrone | µg/L | SGS Inhouse Method | 0.229 | <0.02 | >91.2 | <0.02 |
| 302 L | Estrone | µg/L | SGS Inhouse Method | 0.184 | <0.02 | >89.1 | <0.02 |
| Start-up | Naproxen | µg/L | SGS Inhouse Method | 0.141 | <0.02 | >85.8 | <0.02 |
| 75 L | Naproxen | µg/L | SGS Inhouse Method | 0.140 | <0.02 | >85.7 | <0.02 |
| 151 L | Naproxen | µg/L | SGS Inhouse Method | 0.145 | <0.02 | >86.2 | <0.02 |
| 227 L | Naproxen | µg/L | SGS Inhouse Method | 0.149 | <0.02 | >86.5 | <0.02 |
| 302 L | Naproxen | µg/L | SGS Inhouse Method | 0.149 | <0.02 | >86.5 | <0.02 |
| Start-up | phenytoin | µg/L | SGS Inhouse Method | 0.262 | <0.03 | >92.3 | <0.03 |
| 75 L | phenytoin | µg/L | SGS Inhouse Method | 0.176 | <0.03 | >88.6 | <0.03 |
| 151 L | phenytoin | µg/L | SGS Inhouse Method | 0.215 | <0.03 | >90.6 | <0.03 |
| 227 L | phenytoin | µg/L | SGS Inhouse Method | 0.251 | <0.03 | >92.0 | <0.03 |



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# Test Report

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|---|---|---|---|---|---|---|---|
| | | | | Influent spiked water | Effluent filtrated water | | |
| 302 L | phenytoin | μg/L | SGS Inhouse Method | 0.129 | <0.03 | >84.4 | <0.03 |

Remark：
1. *Reduction (%) = (The test result of Influent Spiked Water - The test result of Effluent Filtrated Water) / The test result of Influent Spiked Water ×100%
2. The flow rate is 0.70 L/min.

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