

# TITANSORB® FILTER

## SANITIZATION PROTOCOL

### URGENT RECOVERY PROCEDURE FOR BIOLOGICAL CONTAMINATION

#### ! PROBLEM IDENTIFICATION

- System remained idle without preservation
- No regular backwashing / rinsing
- Formation of:
  - ✓ Biofilm
  - ✓ Microorganisms
  - ✓ Organic deposits inside media

➔ Result: Unacceptable odor + performance loss



#### 🧪 ROOT CAUSE

Low-level chlorination (<1 ppm) is NOT sufficient  
 ↓  
 No penetration into biofilm  
 ↓  
 No oxidation of embedded organics  
 ↓

**COMPLETE BIOLOGICAL GROWTH  
INSIDE MEDIA**

### WATCH WATER APPROVED SOLUTION

#### STEP 1 INTENSIVE BACKWASH



30-40%  
EXPANSION

- Full expansion: 30-40%
- Duration: 20-30 minutes
- Goal:**
  - ✓ Remove loose biomass
  - ✓ Open media structure

#### STEP 2 HIGH PERFORMANCE OXIDATIVE SANITIZATION

**PRIMARY SOLUTION:  
OXYDES®  
0.5 - 1.0%**

- Fill vessel completely
- Soaking time: 4-8 hours (overnight recommended)
- Optional: recirculation

- ✓ **EFFECT:**
  - ✓ Complete biofilm destruction
  - ✓ Oxidation of trapped organics
  - ✓ Restoration of adsorption capacity

#### STEP 3 BACKWASH & RINSE



- Backwash: 15-20 minutes
- Rinse until:
  - ✓ Clear water
  - ✓ No odor

#### STEP 4 SYSTEM RESTART



- Flush to drain: 30-60 minutes
- Verify:
  - ✓ No smell
  - ✓ Stable water quality

### ALTERNATIVE CHEMICALS – TECHNICAL EVALUATION

Symbol	Chemical	Technical Evaluation
🚫	ClO <sub>2</sub>	<b>CHLORINE DIOXIDE</b> • Poor biofilm penetration • Limited internal cleaning <b>NOT RECOMMENDED for recovery</b>
⚠️	NaOH 0.5 - 1%	<b>NaOH (0.5 - 1%)</b> • Removes organics only • No full disinfection <b>Use ONLY as pre-cleaning (optional)</b>
⚠️	H <sub>2</sub> O <sub>2</sub>	<b>HYDROGEN PEROXIDE</b> • Mild oxidation • Limited biofilm removal <b>Less effective</b>
⚠️	PAA	<b>PERACETIC ACID</b> • Strong disinfectant • Aggressive to materials <b>Use only controlled (≤0.5%)</b>
🚫	Cl	<b>LOW CHLORINE (&lt;1 ppm)</b> <b>INEFFECTIVE for remediation</b>

### CHEMICAL COMPATIBILITY – TITANSORB®

PARAMETER	RECOMMENDATION
Optimal pH Range (BEST PERFORMANCE)	<b>6.5 - 6.9</b> ★
General Operating Range	5.5 - 9.0
Minimum pH (short-term)	~ 4.0
Strong Alkali (short-term)	Avoid > pH 10
Acid Exposure	Short contact only

### PREVENTION PROTOCOL

Weekly backwash if idle

Avoid stagnation

Maintain flow or recirculation

Preserve system during shutdown

### ✓ EXPECTED RESULT

- ✓ Complete odor removal
- ✓ Elimination of biological contamination
- ✓ Restoration of Titansorb performance

### ⚠️ IMPORTANT

If odor persists after full protocol:  
 ➔ Partial media replacement may be required

### TYPICAL FLOW – SANITIZATION PROCESS



## WATCH WATER – ENGINEERED SOLUTIONS FOR EXTREME WATER CONDITIONS

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