

THE HOT TUB REPORT

SMELLY, HARSH, OR IRRITATING HOT TUB WATER: TROUBLESHOOTING FLOWCHART

WHY DOES MY HOT TUB WATER SMELL OR IRRITATE?

Unpleasant odors and irritation are usually caused by contaminants, poor water balance, or buildup in the water or plumbing. Find the cause and follow the steps to fix it.

IMPORTANT: THE ODOR IS THE SYMPTOM, NOT THE CAUSE.

TEST YOUR WATER

Use a reliable test kit (liquid kit preferred).
Test 1–2 times per week and after heavy use.



WATER SMELLS LIKE...



STRONG “CHLORINE” SMELL

Usually chloramines (used-up chlorine), not excess free chlorine.

CAUSES:

- ✓ High bather waste
- ✓ Low free chlorine
- ✓ High combined chlorine
- ✓ Poor oxidation

SYMPTOMS:

- Strong chemical odor
- Red or irritated eyes
- Skin or respiratory irritation
- Sanitizer won't hold



ACTION: SHOCK THE WATER

Oxidize waste and chloramines.
Continue to Step 3 below.

WATER SMELLS LIKE...



MUSTY, SOUR, OR SWAMPY SMELL

CAUSES:

- ✓ Low sanitizer
- ✓ Dirty filters
- ✓ Old water (high TDS)
- ✓ Biofilm in plumbing
- ✓ Organic debris

SYMPTOMS:

- Musty or sour odor
- Cloudy or dull water
- Irritation
- Sanitizer disappears quickly



ACTION: CLEAN, SHOCK, AND EVALUATE

Clean filters, shock, and test water.
If odor returns quickly, go to Step 6.

WATER SMELLS LIKE...



CHEMICAL, PERFUME, OR FRAGRANCE SMELL

CAUSES:

- ✓ Lotions, sunscreen, deodorants
- ✓ Hair products, cosmetics
- ✓ Laundry detergent in swimsuits
- ✓ Spa fragrances or oils

SYMPTOMS:

- Chemical or artificial scent
- Foam or cloudy water
- Harsh or irritating skin/eyes
- Sanitizer demand high



ACTION: REMOVE CONTAMINANTS

Shock, use enzymes, deep-clean filters, and improve circulation.

HARSH / IRRITATING WATER



COMMON CAUSES:

- ✓ Low pH (acidic)
- ✓ High pH (weak sanitizer)
- ✓ High combined chlorine
- ✓ High sanitizer levels
- ✓ High TDS (old water)
- ✓ Biofilm in plumbing

SIGNS:

- Stinging eyes or skin
- Dry or itchy skin
- Strong odor
- Foam or cloudiness

2 MOST COMMON CAUSES (DETAILED)

A

COMBINED CHLORINE (CHLORAMINES)

Chlorine reacts with organic waste.

- Strong odor
- Eye irritation
- Skin irritation
- Sanitizer won't hold

B

LOW SANITIZER

Low levels allow bacteria and organics to build up.

- Smelly water
- Cloudy water
- Bacteria growth
- Poor water quality

C

pH OR ALKALINITY OUT OF RANGE

Improper balance reduces sanitizer effectiveness.

- Low pH: acidic, stinging
- High pH: weak sanitizer, odor, cloudiness

HIGH

D

DIRTY OR OLD FILTERS

Filters trap waste and oils.

- Odor
- Irritation
- Cloudy water
- Rapid sanitizer loss

E

HIGH TDS (OLD WATER)

Build-up of dissolved solids over time.

- Musty smell
- Heavy or sticky water
- Irritation
- Sanitizer disappears quickly

F

BIOFILM IN PLUMBING

Biofilm shelters bacteria from sanitizer.

- Odor returns after shocking
- Sanitizer won't hold
- Foam/cloudiness returns

TARGET WATER RANGE

pH	7.2 – 7.8
Total Alkalinity	80 – 120 ppm
Calcium Hardness	150 – 250 ppm
Free Chlorine	3 – 5 ppm
Total Bromine	4 – 6 ppm

Keep water balanced for comfortable, clean, and odor-free water!

3 HOW TO FIX SMELLY, HARSH, OR IRRITATING WATER

1

TEST & BALANCE WATER

Test your water and adjust to target ranges.
Always balance first.

2

SHOCK THE WATER

Use the correct shock for your system.
Run jets with cover open 20–30 min.

3

DEEP-CLEAN FILTERS

- Rinse thoroughly
- Soak in filter cleaner
- Rinse again
- Replace if older than 12–24 months

4

ADD ENZYMES

Helps break down oils, lotions, and organics that cause odor and irritation.

5

IMPROVE CIRCULATION

Run filtration several hours to clear out contaminants.

6

ODOR RETURNS QUICKLY?

Likely high TDS, biofilm, or heavy contamination.
Go to Step 6.

7

FULL RESET (IF NEEDED)

- Purge plumbing
- Drain
- Clean shell & filter bay
- Refill
- Balance chemistry

4 HOW TO PREVENT SMELLY OR IRRITATING WATER



A MAINTAIN SANITIZER

- Keep chlorine or bromine in range
- Shock weekly
- Shock after heavy use



B KEEP WATER BALANCED

- TA: 80–120 ppm
- pH: 7.2–7.8
- CH: 150–250 ppm



C CLEAN FILTERS

- Rinse every 1–2 weeks
- Deep-clean monthly
- Replace every 12–24 months



D REDUCE BATHER CONTAMINANTS

- Shower before soaking
- Rinse swimsuits with plain water
- Avoid lotions, deodorants, makeup, hair products



E DRAIN ON SCHEDULE

- Drain every 3–4 months (or per your water replacement interval)
- Drain sooner if water quality declines



REMEMBER

Clean water, proper balance, and regular maintenance prevent odors and irritation.
Consistent care = better hot tubbing!

NOTE: Always follow product instructions and test water regularly. | Good maintenance • Consistent testing • Balanced chemistry = Clear, clean, enjoyable water!