

ILLUSTRATED STEPS / SAVE IT. FIND IT. BUILD IT.

BLEACH

Make weak bleach from salt water and a 12-volt battery, then use it on water and surfaces, with the gas rules up front.



GAS RULES FIRST:

FULL RULES / PAGE 03

Outdoors only. No flames or sparks near the fizz. Never mix bleach with other cleaners.

Bleach kills germs. It does nothing to radiation.

START HERE

01

GET READY

Tools + clickable build map

02

FOLLOW THE STEPS

One clearly numbered stage at a time

03

FIND IT AGAIN

Quick reference + PDF bookmarks

For when store bleach is gone. Plain unscented store bleach is stronger and more predictable, so use it first. Homemade bleach is weak, about 1% at best.

NUKE ON TIKTOK

MORE FREE BUILD GUIDES

SOURCES / EPA: emergency disinfection of drinking water · Wikipedia: Sodium hypochlorite

BUILD MAP

NEXT

YOUR BUILD MAP

Tap a step to jump there. The printed page numbers work offline too.

HAVE THESE READY

- Plain rock salt or sea salt
- Clean water; two plastic buckets
- Carbon rods (heavy-duty D cells)
- Two alligator-clip cables
- 12 V car battery or 12 V solar panel
- Teaspoon; clean jug with a cap
- Gloves and eye protection
- Chlorine test strips (optional)

READ IN ORDER

PREP	Gas, sparks and mixing rules	03
01	Make the brine	04
02	Build the cell	05
03	Run the cell	06
04	Disinfect water and surfaces	07
NOTE	Store and test it	08
NOTE	Sources and limits	09

QUICK REFERENCE / PAGE 10

BEFORE YOU START

Outdoors only: chlorine and hydrogen gas. No flames. Never mix with other cleaners.
Homemade is weak (~1%): dose by smell test. No effect on radiation.

KEEP THIS COPY

Save the PDF with its guide ID. Use the build map, bookmarks, or your PDF reader's search to find a step later. Video and source links need internet; the instructions do not.

SETUP

Gas, sparks and mixing rules

READ BEFORE STEP 01

PREP

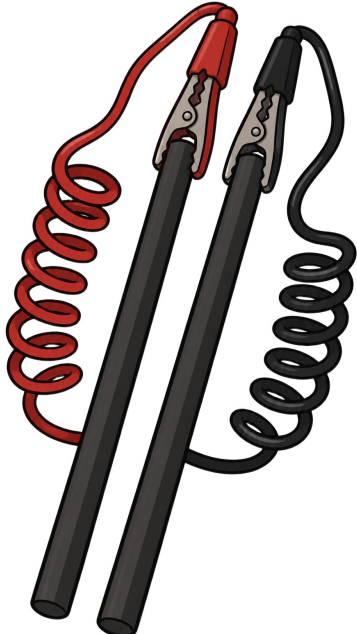
The cell makes two gases. Plan for both before you connect anything.



WORK OUTSIDE, UPWIND



NEVER MIX CLEANERS



CARBON RODS



12 V BATTERY

STOP / BEFORE YOU START

- **The cell gives off chlorine gas at one rod and hydrogen, which burns, at the other.**
- Work outdoors and upwind, with no flames, sparks or smoking nearby.
- Wear eye protection and gloves.
- Never mix bleach with ammonia, vinegar, acids or other cleaners: that releases toxic gas.

STORE BLEACH FIRST

- **Regular unscented household bleach, about 6 to 8.25%, is the standard for disinfecting water.**
- Homemade bleach is the backup when that runs out.

SOURCES / CDC: chlorine chemical fact sheet · EPA: emergency disinfection of drinking water

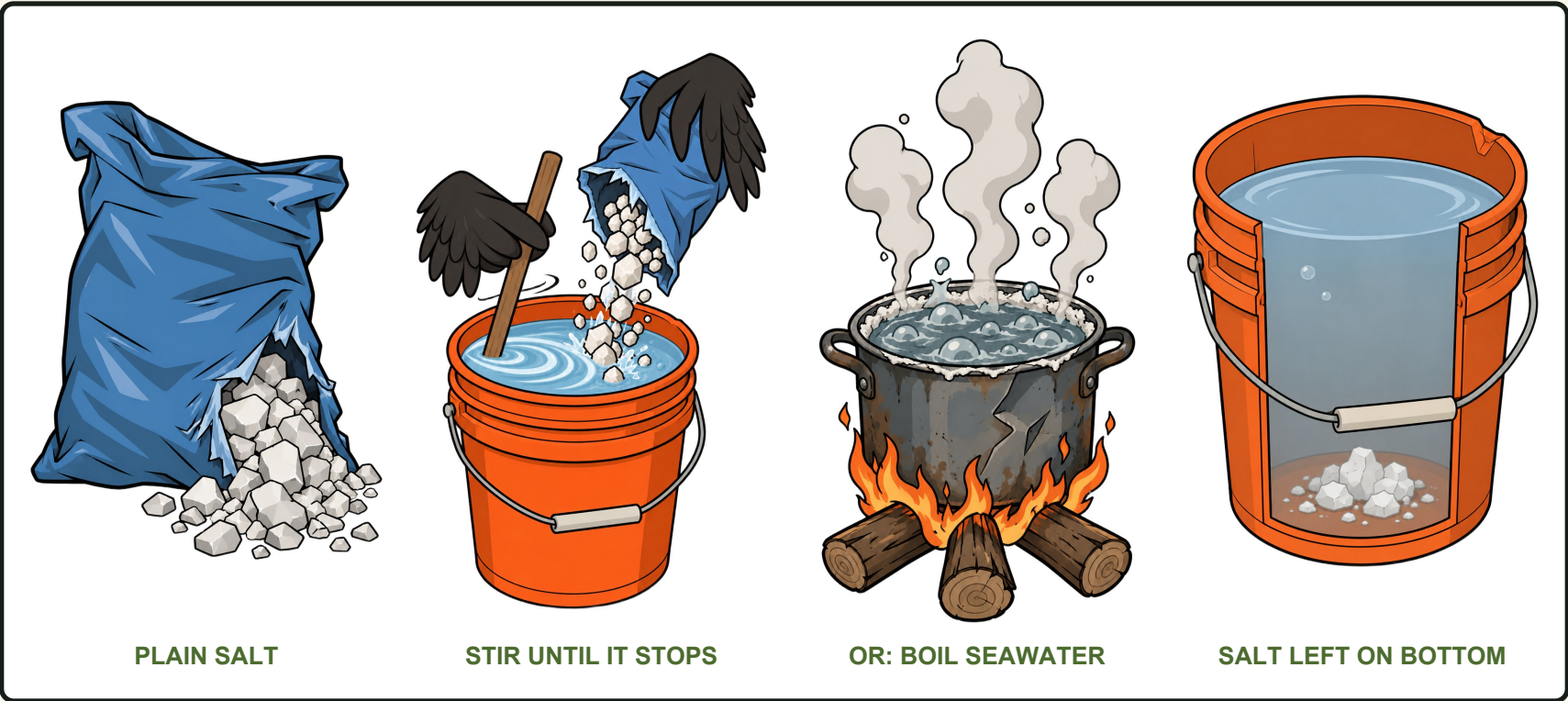
STEP

Make the brine

1 OF 4 / READ IN ORDER

01

Salt water carries electric current; plain water barely does.



SATURATED BRINE

- **Use a clean plastic bucket, not metal.**
- Stir plain salt into clean water until some stays undissolved on the bottom.
- Rock salt or boiled-down sea salt works; skip de-icers labelled calcium or magnesium chloride.
- Let the grit settle, then pour the clear brine into a second plastic bucket.

WHY IT WORKS

- **Dissolved salt splits into charged ions that carry the current.**
- Without them, the battery has almost nothing to push through.

SOURCES / Wikipedia: Chloralkali process (salt electrolysis) · Wikipedia: Sodium hypochlorite

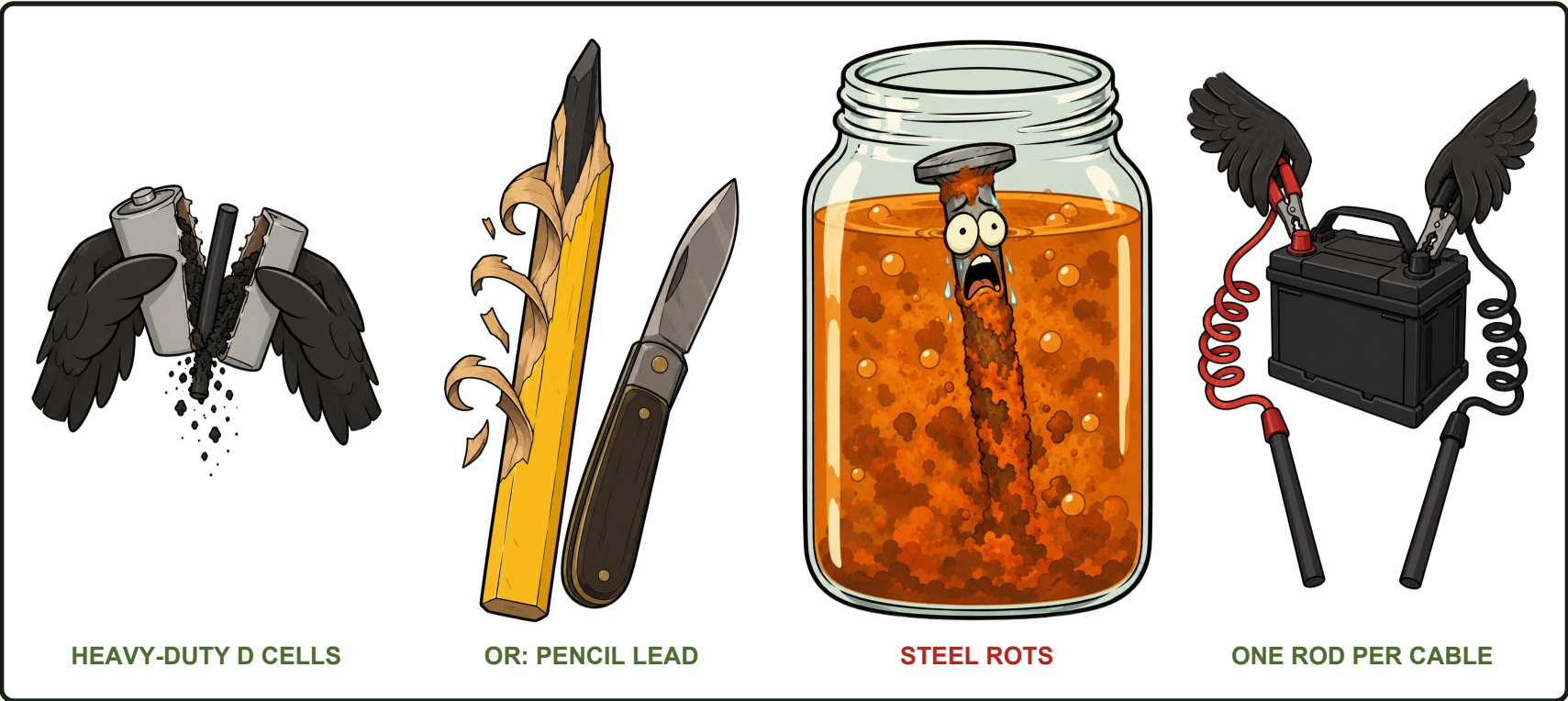
STEP

Build the cell

2 OF 4 / READ IN ORDER

02

Two carbon rods, one on each battery cable.



HEAVY-DUTY D CELLS

OR: PENCIL LEAD

STEEL ROTS

ONE ROD PER CABLE

RODS AND CLIPS

- Carbon rods come from heavy-duty zinc-carbon D or C batteries, not alkaline ones.
- Wear gloves and eye protection to crack them open, and wash the black paste off the rods.
- Carpenter-pencil lead works too, but it is weak and crumbles.
- Clip one rod to each battery cable.

STOP / NO STEEL RODS

- Steel or iron rods corrode fast in chlorine and spoil the bleach with rust.
- Use carbon (graphite) only.

SOURCES / Wikipedia: Chloralkali process (salt electrolysis) · Wikipedia: Sodium hypochlorite

STEP

Run the cell

3 OF 4 / READ IN ORDER

03

Hours of low current turn the brine into weak bleach.



JUICE IT

- Hang both rods in the brine a few inches apart; they must never touch.
- Connect the cables to a 12-volt car battery or a 12-volt solar panel, battery end last.
- Run it outdoors for several hours, keeping the bucket cool and out of the sun.
- Disconnect the battery before you lift the rods out.

STOP / THE FIZZ

- The bubbles are mostly hydrogen, which can catch fire, carrying chlorine gas, which harms the lungs.
- Outdoors, upwind, no flames and no smoking.

WHY IT WORKS

- Current splits salt water into chlorine at one rod and lye at the other; mixed, they form sodium hypochlorite, which is bleach.
- Expect roughly 0.5 to 1%.

SOURCES / Wikipedia: Chloralkali process (salt electrolysis) · Wikipedia: Sodium hypochlorite · CDC: chlorine chemical fact sheet

STEP

Disinfect water and surfaces

4 OF 4 / READ IN ORDER

04

Dose by the smell test, because homemade strength varies.



1/2 TSP PER GALLON

WAIT 30 MIN

MOP AND WIPE

WIPE OFF DUST

BAG THE RAG

WATER

- **Use clear water; let cloudy water settle and filter it through clean cloth first.**
- Add about 1/2 teaspoon of homemade bleach per gallon, stir and wait 30 minutes.
- It should smell faintly of chlorine.
- No smell?
- Add the same dose again and wait 15 more minutes.
- Store bleach: 8 drops of 6% per gallon.

SURFACES AND FALLOUT DUST

- **Mop toilets and wipe surfaces with it.**
- For fallout dust on boots and gear, wipe it off with a damp cloth and seal the cloth in a bag.
- Removing the dust is what helps; bleach does nothing to radiation.

SOURCES / EPA: emergency disinfection of drinking water · CDC: how to make water safe in an emergency · Ready.gov: radiation emergencies

NOTE

Store and test it

KEEP THESE LIMITS WITH THE STEPS

REF

Label it, keep it dark, and make small batches.



LABEL IT, KEEP IT DARK



SURFACES AND WATER

STORE IT

- **Pour it into a clean, opaque plastic jug with a cap.**
- Label it BLEACH / DO NOT DRINK.
- Keep it cool, dark and out of children's reach.
- Homemade batches lose strength over time, faster in heat and sunlight, so make small fresh batches.

TEST IT

- **Chlorine or pool test strips show whether treated water has free chlorine.**
- If treated water has no chlorine smell or reading, the batch is too weak.

SOURCES / Wikipedia: Sodium hypochlorite · EPA: emergency disinfection of drinking water

NOTE

Sources and limits

KEEP THESE LIMITS WITH THE STEPS

REF

Checked October 3, 2026. Tap a source in the box to open it.

SOURCES / TAP A TITLE TO OPEN IT

EPA: emergency disinfection of drinking water
<https://www.epa.gov/ground-water-and-drinking-water/emergency-disinfection-drinking-water>

CDC: how to make water safe in an emergency
<https://www.cdc.gov/water-emergency/about/index.html>

Wikipedia: Sodium hypochlorite
https://en.wikipedia.org/wiki/Sodium_hypochlorite

Wikipedia: Chloralkali process (salt electrolysis)
https://en.wikipedia.org/wiki/Chloralkali_process

CDC: chlorine chemical fact sheet
<https://www.cdc.gov/chemical-emergencies/chemical-fact-sheets/chlorine.html>

Ready.gov: radiation emergencies
<https://www.ready.gov/radiation>

ABOUT THIS GUIDE

- This is an editorial source review, not a tested batch.
- The strength of homemade bleach is unknown without a test, so the smell test and repeat dose are part of every use.

STOP / WHERE THIS GUIDE ENDS

- Bleach does not fix chemical or radioactive contamination in water.
- Never drink bleach or treated water that smells strongly of it.
- Follow local water advisories when you have them.

SOURCES / EPA: emergency disinfection of drinking water · CDC: how to make water safe in an emergency · Wikipedia: Sodium hypochlorite · Wikipedia: Chloralkali process (salt electrolysis) · CDC: chlorine chemical fact sheet · Ready.gov: radiation emergencies

QUICK REFERENCE

Read the full steps first. Tap any row to return to its instructions.

BEFORE STEP 01

Outdoors only: chlorine and hydrogen gas. No flames. Never mix with other cleaners.
Homemade is weak (~1%): dose by smell test. No effect on radiation.

01	Make the brine Plain salt in clean water until some stays on the bottom. Plastic bucket. Pour off the clear brine.	P04
02	Build the cell Carbon rods from heavy-duty D cells (gloves) or pencil lead. Never steel. One rod per battery cable.	P05
03	Run the cell Rods apart, never touching. 12 V battery or panel for hours, outdoors, cool, no flames. About 1% bleach.	P06
04	Disinfect Clear water: about 1/2 tsp per gallon, 30 min, faint chlorine smell. No smell: dose again, wait 15 min.	P07

NUKE SAYS

Germs fear you now. Radiation does not care. Plan for both.

STOP / CHLORINE AND HYDROGEN RULES

FULL RULES / PAGE 03

▪ Outdoors, upwind only

▪ No flames, sparks, smoking

▪ Eye protection and gloves

▪ Rods never touch

▪ Never mix with other cleaners

▪ Label it: DO NOT DRINK

▪ Use store bleach first

▪ Does nothing to radiation

Store bleach dose: 8 drops of 6% (or 6 drops of 8.25%) per gallon, doubled for cloudy water; wait 30 minutes for a faint chlorine smell.

SOURCES / EPA: emergency disinfection of drinking water · CDC: how to make water safe in an emergency · Wikipedia: Sodium hypochlorite · Wikipedia: Chloralkali process (salt electrolysis) · CDC: chlorine chemical fact sheet · Ready.gov: radiation emergencies