

Fluorine gas

Fluorine

F

9

18,998

4,1

[He] 2s²2p⁵

Fluorine

is derived from the Latin
"fluere" meaning "to flow".

Halogen

Fluorite crystals



Gas

Tan or yellow gas;
found in the mineral
fluorite.

Used in toothpaste,
nuclear power
plants.

Halogen



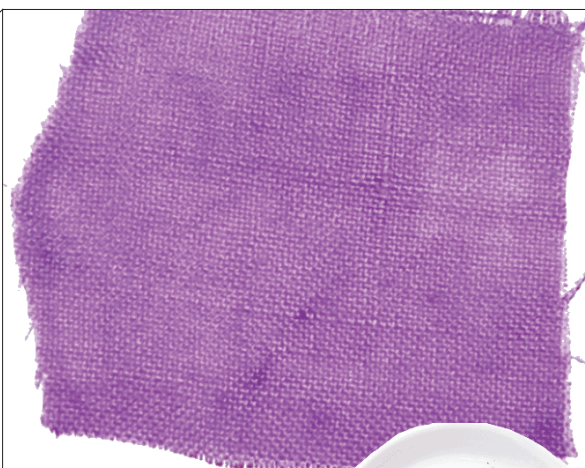
Bromine

Bromine Br^{35}
79,904
2,7
[Ar] $3d^{10}4s^24p^5$

Bromine

derives from the Greek
"brómos", meaning "stench",
due to its characteristic smell.

Halogen



Tyrian purple dye
contains Bromine

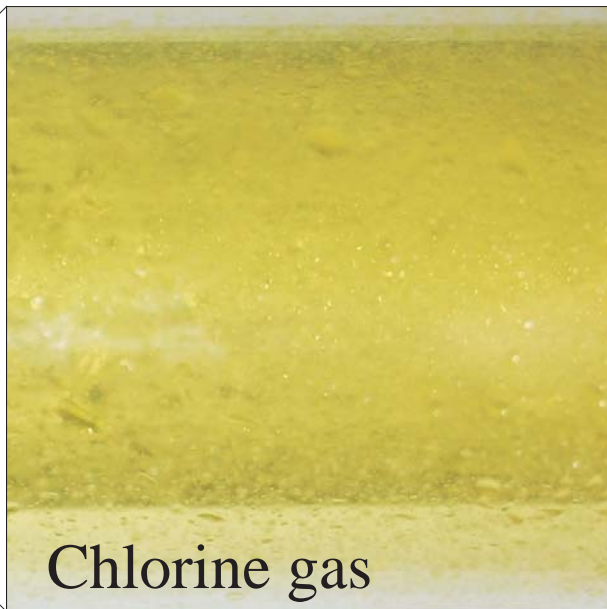


Halogen

Liquid

Dense, slightly
transparent reddish-
brown.

Found in sea water,
salt mines. Used in
photographic film.



Chlorine gas

Chlorine

Cl¹⁷

35,453

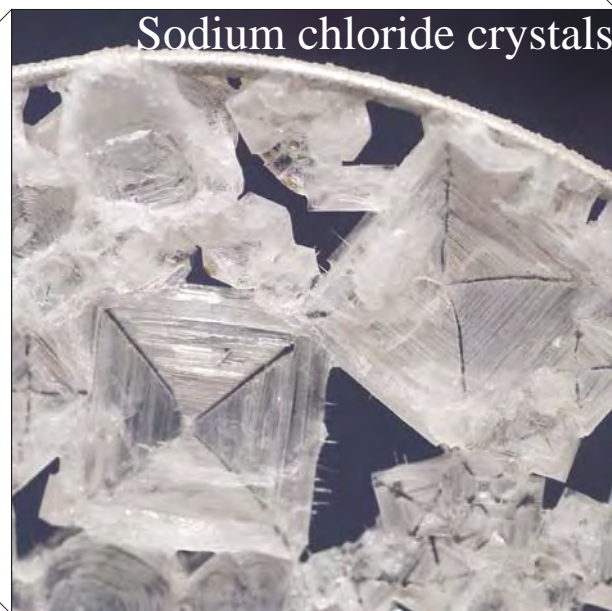
2,8

[Ne] 3s²3p⁵

Chlorine

is derived from the Greek
“chlor s”, meaning “yellowish
green” or “greenish yellow”.

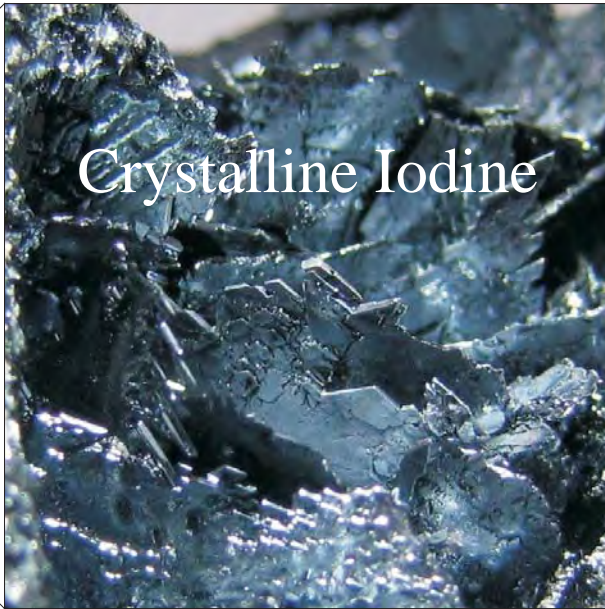
Halogen



Sodium chloride crystals

Gas

Pale yellow-green
gas. Bonds with
sodium to form table
salt, combines with
hydrogen to form
HCl, ingredient in
PVC plastics.



Crystalline Iodine

Iodine

I

53

126,904

2,2

[Kr] 4d¹⁰5s²5p⁵

Halogen

×

Iodine

is named after the Greek, "iodes", meaning "violet", because of the color of the gas.

Halogen

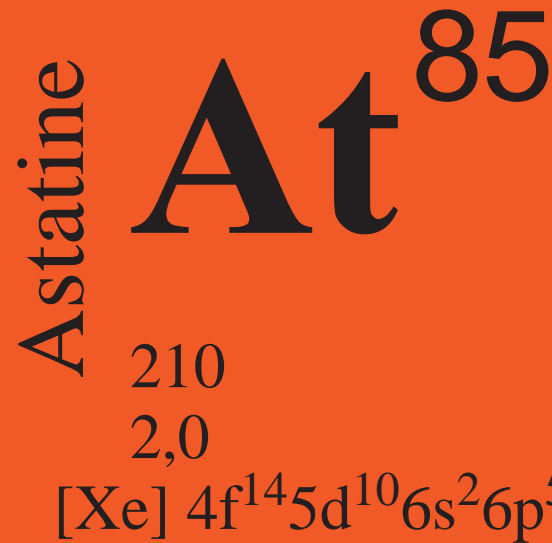


Wound covered in povidone-iodine

Solid

Lustrous metallic grey, violet as a gas. Used in halogen lamps, ink pigments, as a disinfectant and in photographic film.

Astatine has 33 known isotopes, all are radioactive; the range of their mass numbers is from 191 to 223. The longest-lived isotope is ^{210}At which has a half-life of 8.1 hours; the shortest-lived known isotope is ^{213}At , which has a half-life of 125 nanoseconds.

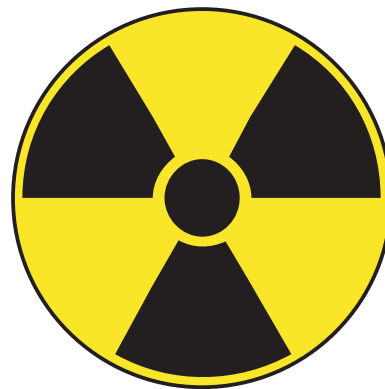


Halogen

Astatine

derives from the Greek
"astatos", meaning "unstable".

Halogen



^{219}At decays with a half-life of 56 seconds.

Solid

Presumed to be a black solid.
Little practical applications;
heavier isotopes have medical uses.