

Massive Oxidation Number Assignment

Assign the oxidation numbers of all the elements in the following substances:

1. Sulphur compounds:

- SO₂
- SF₆
- H₂SO₄
- H₂S
- Na₂SO₃

2. Chlorine compounds:

- KCl
- NaClO₃
- Cl₂O
- ICl₅
- Cl₂O₇

3. Nitrogen compounds:

- N₂O
- NO
- N₂O₄
- NH₃
- HNO₃

4. Carbon compounds:

- CH₄
- C₂H₄
- HCOOH
- CO₂
- CH₂Cl₂

5. Manganese compounds:

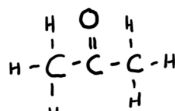
- MnO₂
- MnBr₂
- Mn₂S₃
- KMnO₄
- Na₂MnO₄

6. Vanadium compounds:

- VOSO₄
- VCl₂
- VO₂NO₃
- V₂O₃
- VOCl₂

7. Iridium species:

- [IrO₄]⁺
- IrSe₂
- IrO₄
- IrCl₂
- Ir₄F₂₀



8. Propanone has the structure:

What is the oxidation state of C in this molecule? Is that possible? How can it be explained?

Extension

9. Using the periodic table as a guide, what would you EXPECT to be the **four** most common oxidation states for Iodine? Why?