

7
N
Nitrogen

15
P
Phosphorus

33
As
Arsenic

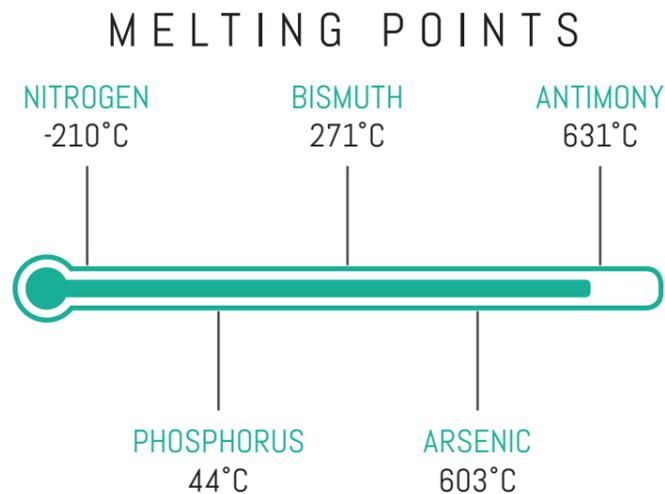
51
Sb
Antimony

83
Bi
Bismuth

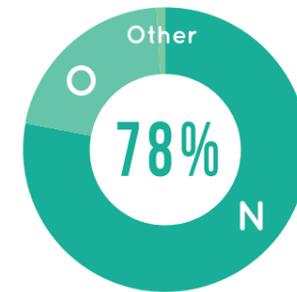
115
Uup
Ununpentium

Group 15 - The Pnictogens

THE GROUP 15 ELEMENTS ARE ALL SOLIDS APART FROM NITROGEN, AND ARE A MIX OF NON-METALS, METALLOIDS AND A METAL



BISMUTH IS THE ONLY METALLIC ELEMENT PRESENT IN GROUP 15



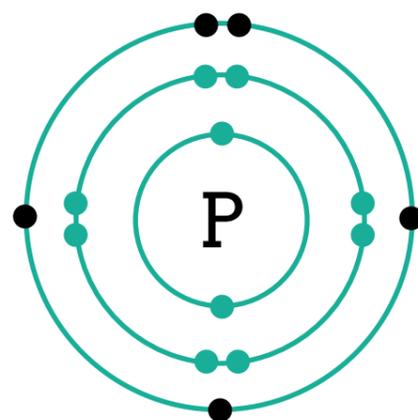
NITROGEN IS THE MOST ABUNDANT ELEMENT IN THE EARTH'S ATMOSPHERE

THE PNICTOGENS FORM **PNICTIDES** WITH MOST ELEMENTS

PHOSPHORUS CONTAINING **CALCIUM PHOSPHATE COMPOUNDS** MAKE UP

PNICTOGENS FORM:
HYDRIDES WITH **HYDROGEN**
OXIDES WITH **OXYGEN**
HALIDES WITH **HALOGENS**

70%
OF HUMAN BONE



ALL OF THE GROUP 15 ELEMENTS HAVE FIVE VALENCE ELECTRONS

ANCIENT EGYPTIANS USED THE **ANTIMONY COMPOUND** CALLED STIBNITE AS **EYE MAKE-UP**



0.06 GRAMS OF ARSENIC IS A LETHAL DOSE



USES OF THE PNICTOGENS



NITROGEN
EXPLOSIVES
FERTILISERS



PHOSPHORUS
SAFETY MATCHES
SMOKE BOMBS



ARSENIC
AMMUNITION
MANUFACTURING



ANTIMONY
FLAME
RETARDENTS
COSMETICS



BISMUTH
X-RAY SHIELDS
MEDICINES