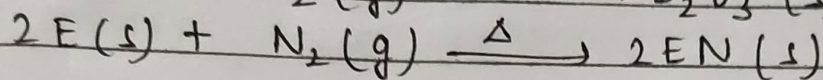
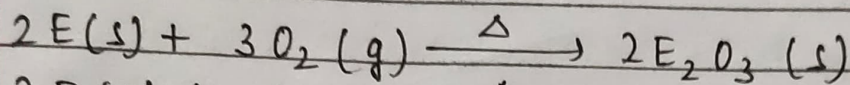


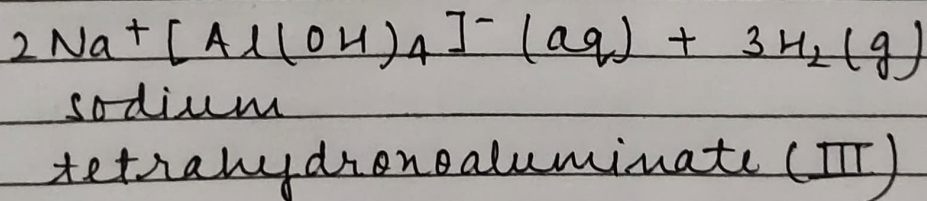
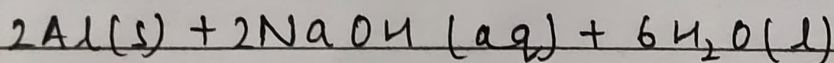
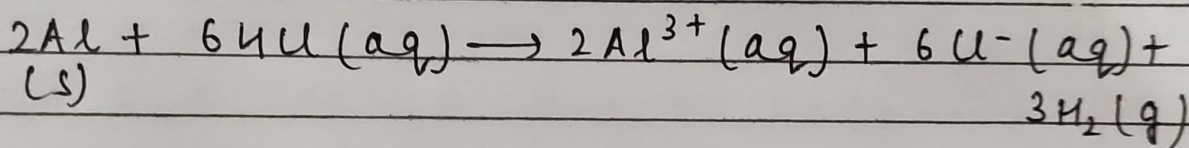
Reactions of Group-13 elements

(i) Reactivity towards air

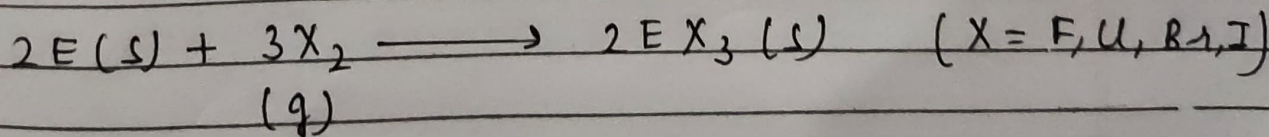


E = Element

(ii) Reactivity towards acids and alkalis



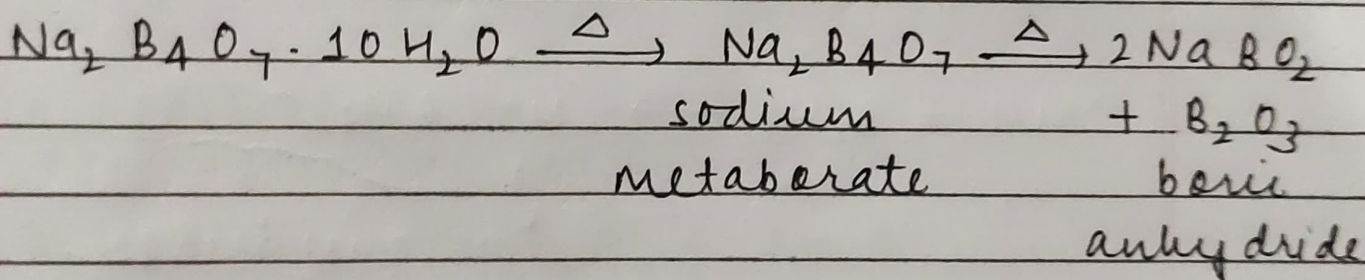
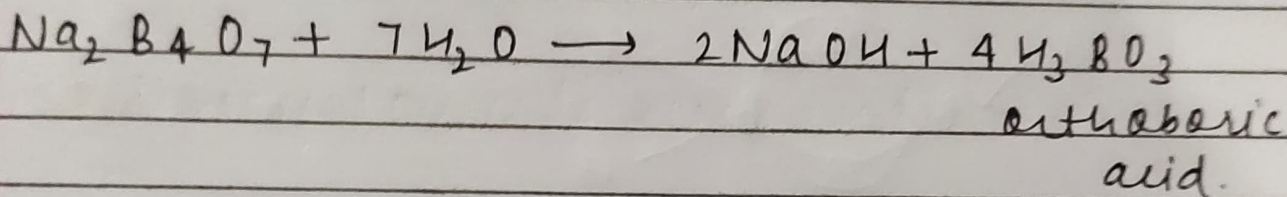
(iii) Reactivity towards halogens



some important compounds of boron

1) Borax

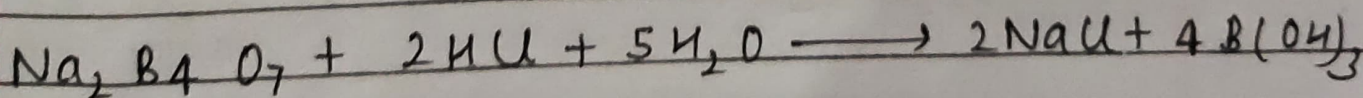
↓ white crystalline solid of formula
 $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$



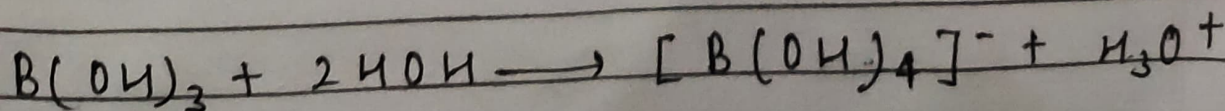
2) Orthoboric acid

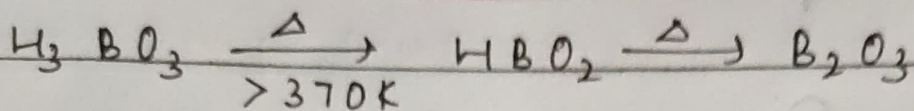
↓ white crystalline solid with soapy
touch with formula H_3BO_3

→ Preparation:-



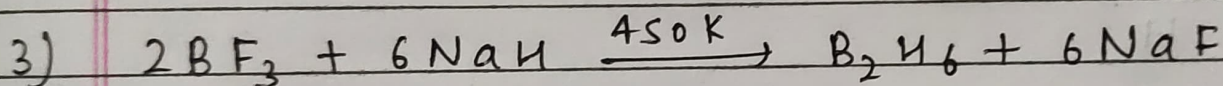
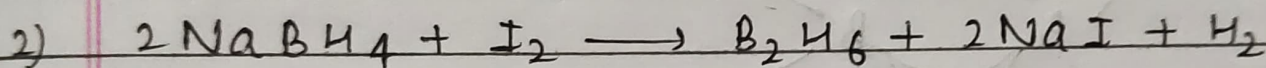
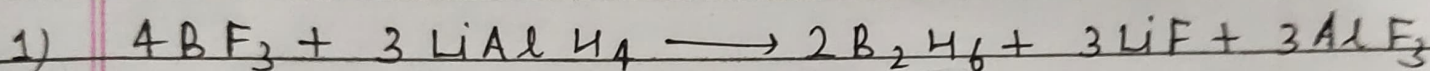
→ Acts as weak monobasic acid. (Lewis acid)



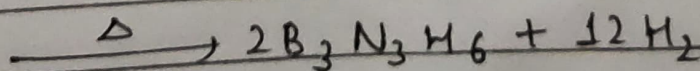
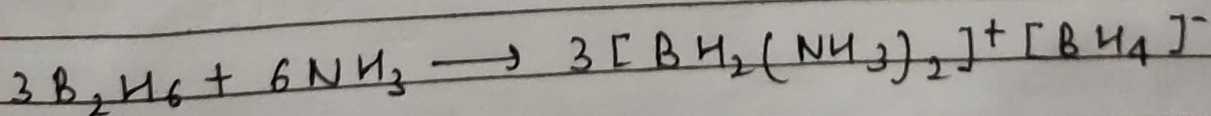
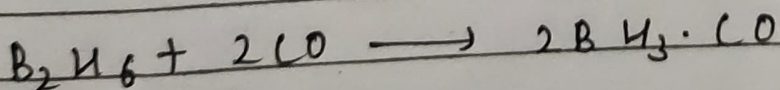
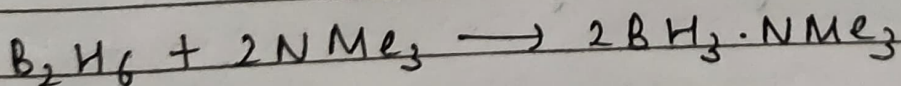
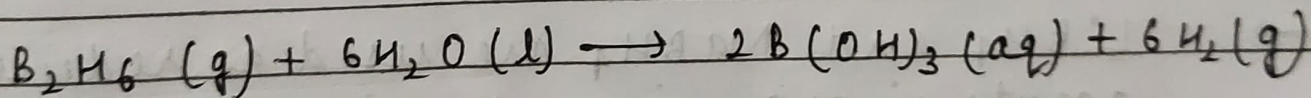
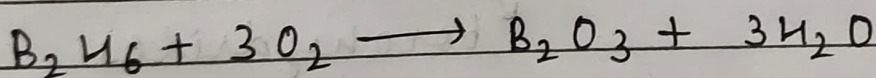


3) Diborane (B_2H_6)

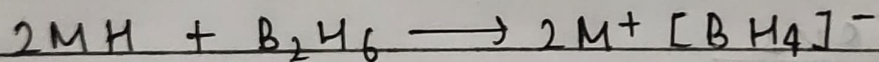
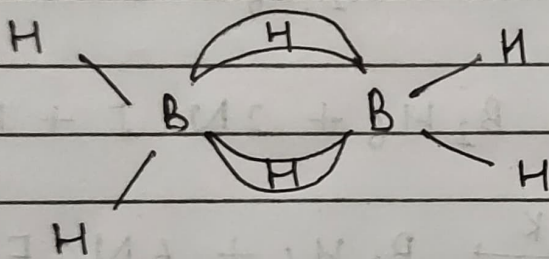
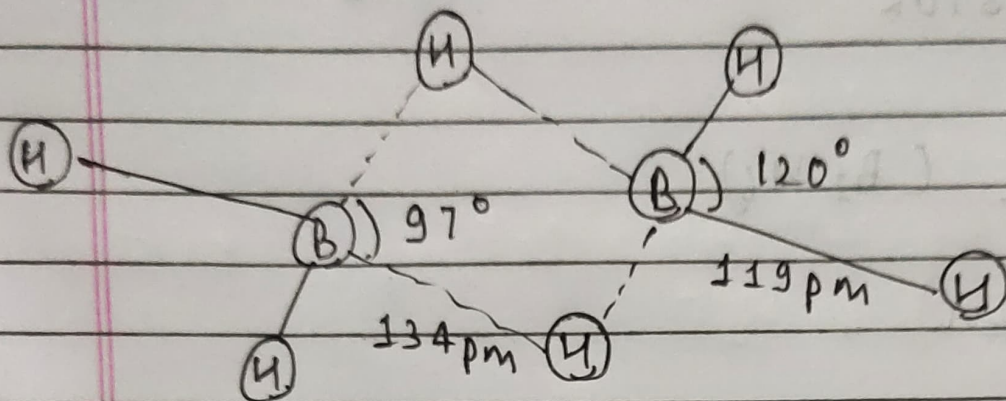
→ Preparation



Other reactions



structure of diborane



↓
borohydrides

→ LiBH_4 and NaBH_4 are used as reducing agents in organic synthesis.