

n-lum.

d.

1650°C

In between

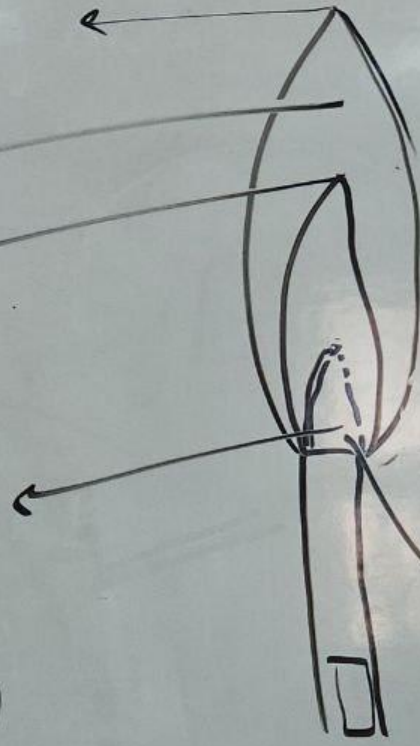
1500°C Inner core

within inner core

~400°C

1000°C

Outer core



قند  
قريب  
O<sub>2</sub>

Complete rxn's

0.11.0

# Bunsen burner

yellow

- Air hole closed
- Safety Flame
- Cool
- Highly visible
- Dirty

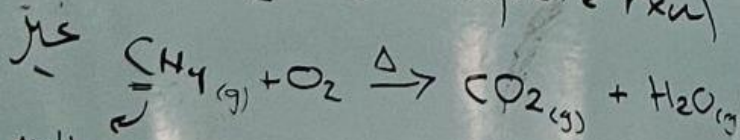
Luminous  
Flame

متوهج

Blue / non-lum.

- Air hole opened.
- Heating
- Hot
- In visible
- Clean Flame.

insufficient  $O_2 \Rightarrow$  (incomplete rxn)



افتراق كامل  
Sufficient oxygen  $\rightarrow$  Complete rxn



## ② Balances

1. Triple beam . manual  $\pm 0.01 \text{ g}$

2. Top loading  $\Rightarrow \pm 0.01 - \pm 0.001 \text{ g}$

3. Analytical Balance  $\Rightarrow \pm 0.0001 - \pm 0.00001 \text{ g}$

## Extensive Prop.

دالة

تغير  
مع  
المقدار

depend on the amount of matter

Mass

Volume

number of mol

length

## Intensive Prop.

Independent of amount of matter

1. Density

6. color

2. Temperature

7. pressure

3. concentration

4. b.p / m.p

5. Conductivity

### 3) Density

1) mass of metal  $\rightarrow$  <sup>نوزن</sup> metal  $\Rightarrow 23.16 \text{ g}$   
 $\rightarrow$  Top loading

2) Volume of  $\text{H}_2\text{O}$   $\rightarrow U_i = 23.0 \text{ ml}$

$- U_f = 25.91 \text{ ml}$

$$U_T = U_f - U_i = 25.91 - 23.00 = 2.91 \text{ ml}$$

$$3) D = \frac{\text{mass}}{\text{Volume}} = \frac{23.16}{2.91} \cong 7.96 \text{ g/cm}^3$$

Density  $\rightarrow$  g/ml  
 $\rightarrow$  g/cm<sup>3</sup>

