

***ATOMIC THEORY +***

***HISTORY OF CHEMISTRY***

# ***BILLIARD BALL MODEL***



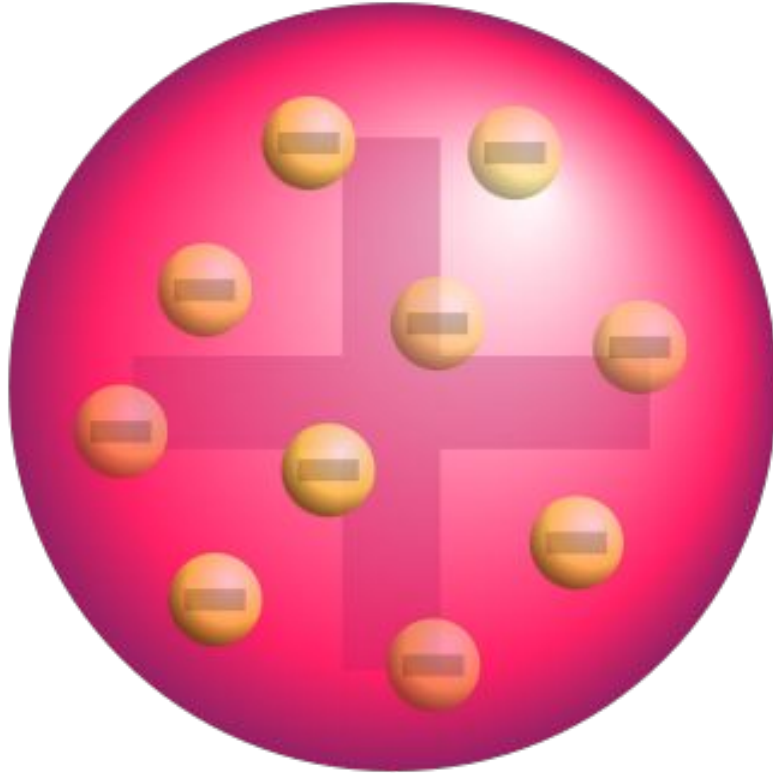
# ***BILLIARD BALL MODEL***

Atoms are  
indivisible +  
indestructible

*Matter can neither  
be created nor  
destroyed*



# ***PLUM PUDDING MODEL***



# ***PLUM PUDDING MODEL***

Find cathode ray tube  
demonstration video here:

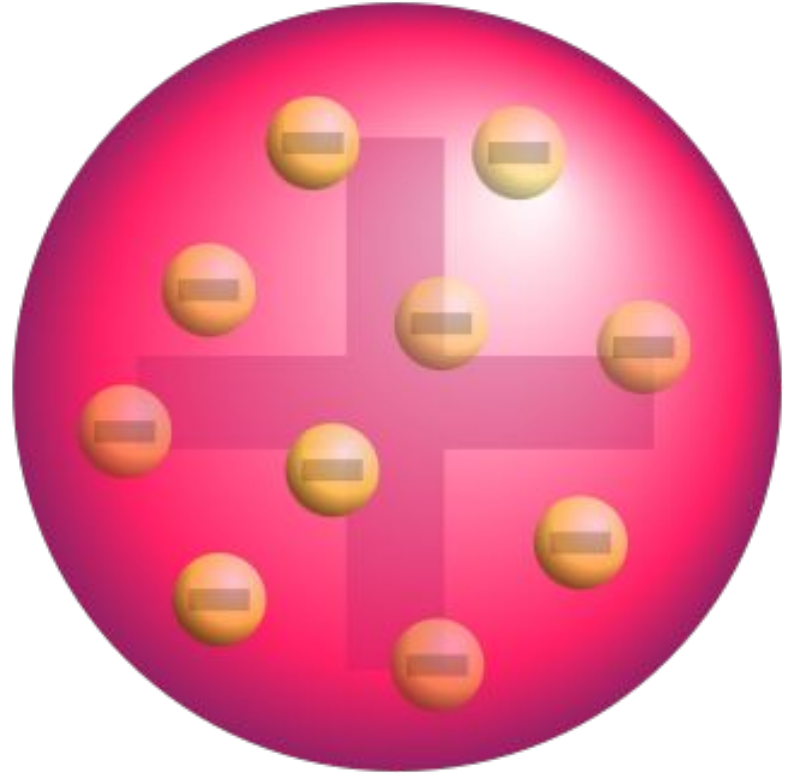
[https://www.youtube.  
com/watch?v=O9Goyscbazk](https://www.youtube.com/watch?v=O9Goyscbazk)

# ***PLUM PUDDING MODEL***

Particles were  
2000x smaller  
than H atom

Charges *within*  
atom

Electrons!



# ***OIL DROP EXPERIMENT***

Find photo here:

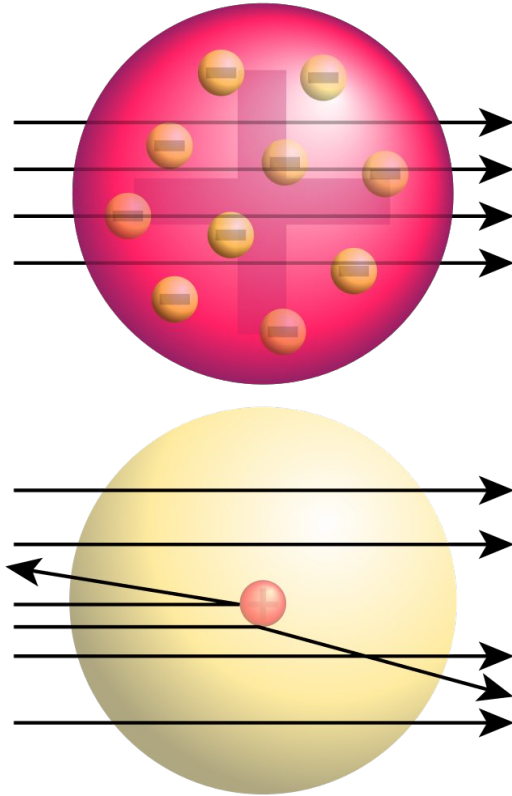
[http://www.learner.  
org/courses/chemistry/images/  
ext\\_img/millikan\\_oil\\_drop.jpg](http://www.learner.org/courses/chemistry/images/ext_img/millikan_oil_drop.jpg)

# ***GOLD FOIL EXPERIMENT***

Find photo here:

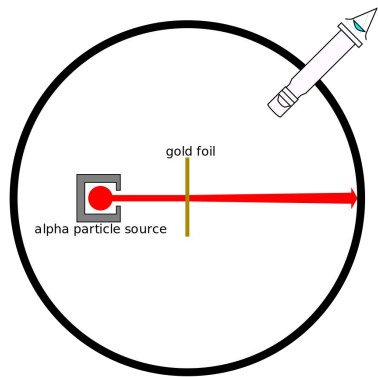
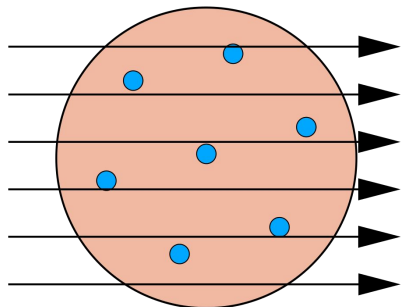
[http://wps.prenhall.  
com/wps/media/objects/602/616  
516/Media\\_Assets/Chapter02/T  
ext/Images/FG02\\_05.JPG](http://wps.prenhall.com/wps/media/objects/602/616516/Media_Assets/Chapter02/Text/Images/FG02_05.JPG)

# ***PLUM PUDDING VS. NUCLEAR***

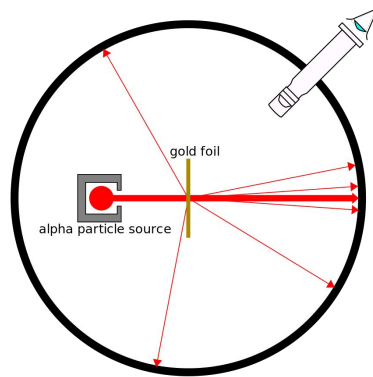
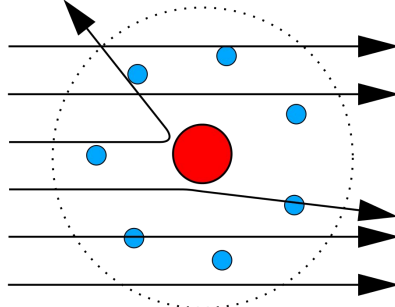


# PLUM PUDDING VS. NUCLEAR

THOMSON MODEL



RUTHERFORD MODEL



OBSERVED RESULT

# ***GOLD FOIL EXPERIMENT (NUCLEAR MODEL)***

Small, super  
dense mass in  
the middle of  
atom

Nucleus, with  
protons!

Find photo here:

[http://wps.prenhall.  
com/wps/media/objects/602/616  
516/Media\\_Assets/Chapter02/T  
ext\\_Images/FG02\\_05.JPG](http://wps.prenhall.com/wps/media/objects/602/616516/Media_Assets/Chapter02/Text_Images/FG02_05.JPG)

# ***GOLD FOIL EXPERIMENT (NUCLEAR MODEL)***

Find atom size TED Talks  
Animation video here:

[https://www.ted.  
com/talks/just\\_how\\_small\\_is\\_an  
\\_atom#](https://www.ted.com/talks/just_how_small_is_an_atom#)