REQUIREMENTS FOR STORAGE OF FLAMMABLE MATERIAL IN LABORATORY

Liquid in Laboratory					
		Excluding Qty in Cabinet		**Including Qty in Cabinet**	
Lab Unit Hazard Class	**Liquid Class**	**Max Qty Liters per sq m**	**Max Qty Liters per lab unit**	**Max Qty Liters per sq m**	**Max Qty Liters per lab unit**
Laboratory other than lab in hospital and health care occupancy	I	0.8	250 (350)	1.6	500 (750)
	I, II, III	1.6	350 (500)	3.2	750 (1000)
Laboratory in hospital and health care occupancy	I	0.4	150 (250)	0.8	250 (500)
	I, II, III	0.4	150 (250)	0.8	250 (500)

(*) = max quantity allowed for sprinkler protected lab

Liquid class: Class I: Flash point below 37.8 degree C
Class II: Flash point between 37.8 to 60 degree C
Class III: Flash point above 60 degree C

Note: (1) The classification and the allowable quantity of flammable/combustible liquid may be revised later base on the new revision of CP40;

(2) Each safety cabinet is restricted to 250L;

MAXIMUM ALLOWABLE QUANTITY FOR GASSES PER LAB WORK AREA (WITH SPRINKLER SYSTEM)

1. **Flammable gasses**

   170 L for 50 sq meters and less

   Y (L) = 3.4 x Lab work area for > 50 sq meters

2. **Oxidizing gasses**

   170 L for 50 sq meters and less

   Y (L) = 3.4 x Lab work area for > 50 sq meters

3. **Liquefied flammable gasses**

   30 L for 50 sq meters and less

   Y (L) = 0.6 x Lab work area for > 50 sq meters

4. **Toxic gasses**

   8 L for 50 sq meters and less

   Y (L) = 0.16 x Lab work area for > 50 sq meters

Note:

(1) For 1 to 3, the MAQ shall be half if the lab is without any sprinkler system;

(2) Spacing of 3 m (6 m for lab without sprinkler system) apart for each group;

(3) To provide the detailed proposal to FSSD for further comment before the actual submission for plan approval to ensure the full compliance of the Fire Code and NFPA 45.