

Table 2 – Calculation of Maximum Container Volume

Check the container volumes from the 6 foot hood column, which apply to the research labs.

Table 2 – Calculation of Maximum Container Volume SFSU New Science Building San Francisco, CA								
Room	Name	Flammable Liquid	Vapor Pressure (mmHg)	LFL (%)	Specific Gravity	Molecular Weight	Maximum Container Volume for 6-Foot-Wide Hood (Liters)	Maximum Container Volume for 8-Foot-Wide Hood (Liters)
SRB 202	Research Biochemistry	Acetonitrile	73	3	0.78	41.1	1.6	2.7
		Benzene	75	1.2	0.88	78.1	1.1	1.8
		1,4-Dioxane	29	2	1.03	88.1	1.8	2.9
		Ethyl acetate	73	2	0.9	88.1	2.0	3.3
		Ethyl alcohol	44	3.3	0.79	46.1	2.0	3.2
		Hexane	124	1.1	0.66	86.2	1.5	2.4
		1-Hexanol	39	1.2	0.85	102.17	1.5	2.4
		2-Propanol	33	2	0.79	60.1	1.6	2.6
		Tert-butanol	42	2.4	0.79	74.1	2.3	3.8
		Toluene	21	1.1	0.87	92.1	1.2	2.0
SRB 205A	Teaching Quantitative Integrated	Acetone	180	2.5	0.79	58.1	1.9	3.1
		Acetonitrile	73	3	0.78	41.1	1.6	2.7
		Benzene	75	1.2	0.88	78.1	1.1	1.8
		2-Bromopropane	216	3.3	1.3	123	3.3	5.2
		Ethyl acetate	73	2	0.9	88.1	2.0	3.3
		Ethyl ether	440	1.9	0.71	74.1	2.1	3.3
		Heptane	40	1.05	0.68	100.2	1.6	2.6
		Hexane	124	1.1	0.66	86.2	1.5	2.4
		Isooctane	49	1.1	0.69	114.23	1.9	3.1
		Tetrahydrofuran	132	2	0.89	72.1	1.7	2.7

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SRB 206	Research Structural Biochemistry	Ethyl alcohol	44	3.3	0.79	46.1	2.0	3.2
		2-Mercaptoethanol	1.7	2.3	1.1	78.14	1.7	2.7
		Methanol	96	6	0.79	32.1	2.5	4.1
		Tetramethylethylene-diamine	15.8	0.98	0.77	116.2	1.5	2.5
SRB 213	Teaching LD 115, 180	1-Butanol	6	1.4	0.81	74.1	1.3	2.2
		Cyclohexane	78	1.3	0.78	84.2	1.5	2.4
		Ethanol	44	3.3	0.79	46.1	2.0	3.2
		Hexane	124	1.1	0.66	86.2	1.5	2.4
		1-Hexanol	39	1.2	0.85	102.17	1.5	2.4
		Methanol	96	6	0.79	32.1	2.5	4.1
		1-Propanol	15	2.2	0.81	60.1	1.7	2.7

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SRB 300	Research Materials	Acetonitrile	73	3	0.78	41.1	1.6	2.7
		1-Butanol	6	1.4	0.81	74.1	1.3	2.2
		Carbon disulfide	297	1.3	1.26	76.1	0.8	1.3
		Dimethyl sulfoxide	0.61	2.6	1.1	78.1	1.9	3.1
		Hexane	124	1.1	0.66	86.2	1.5	2.4
		Methanol	96	6	0.79	32.1	2.5	4.1
		Octane	10	1	0.7	114.2	1.7	2.7
		1-Propanol	15	2.2	0.81	60.1	1.7	2.7
		Tetrahydrofuran	132	2	0.89	72.1	1.7	2.7
		Toluene	21	1.1	0.87	92.1	1.2	2.0
SRB 301	Research Bioorganic	Acetone	180	2.5	0.79	58.1	1.9	3.1
		Acetonitrile	78	1.3	0.78	84.2	1.6	2.7
		Dimethyl sulfoxide	0.61	2.6	1.1	78.1	1.9	3.1
		Ethanol	44	3.3	0.79	46.1	2.0	3.2
		Ethyl acetate	73	2	0.9	88.1	2.0	3.3
		Hexane	124	1.1	0.66	86.2	1.5	2.4
		Methanol	96	6	0.79	32.1	2.5	4.1
		Methylene chloride	350	1	1.33	84.9	8.6	13.9
		Sec-butanol	12	1.7	0.81	74.1	1.6	2.6
		Tetrahydrofuran	132	2	0.89	72.1	1.7	2.7

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Room	Name	Flammable Liquid	Vapor Pressure (mmHg)	LFL (%)	Specific Gravity	Molecular Weight	Maximum Container Volume for 6-Foot-Wide Hood (Liters)	Maximum Container Volume for 8-Foot-Wide Hood (Liters)
SRB 304	Research Analytical	Acetonitrile	73	3	0.78	41.1	1.6	2.7
		2-Butoxyethanol	0.8	1.1	0.9	118.2	1.5	2.4
		Hexane	124	1.1	0.66	86.2	1.5	2.4
		Methanol	96	6	0.79	32.1	2.5	4.1
		Tetrahydrofuran	132	2	0.89	72.1	1.7	2.7
		Toluene	21	1.1	0.87	92.1	1.2	2.0
		1,1,1-Trichloroethane	19	6	1.44	133.4	5.8	9.3
SRB 305	Research Organic	Benzene	75	1.2	0.88	78.1	1.1	1.8
		1-Butylamine	82	1.7	0.74	73.2	1.8	2.8
		Cyclohexane	78	1.3	0.78	84.2	1.5	2.4
		Ethyl acetate	73	2	0.9	88.1	2.0	3.3
		Ethyl ether	440	1.9	0.71	74.1	2.1	3.3
		Hexane	124	1.1	0.66	86.2	1.5	2.4
		Piperidine	40	1.4	0.86	85.15	1.4	2.3
		Tetrahydrofuran	132	2	0.89	72.1	1.7	2.7
		Toluene	21	1.1	0.87	92.1	1.2	2.0
Triethylamine	54	1.2	0.73	101.2	1.7	2.8		

Note: Dilution ventilation rate generated for a 6-foot-wide laboratory hood with sash closed is 310 cfm and 500 cfm for an 8-foot-wide Laboratory hood.