

Supporting information

Quality of Commercial Alcohol-Based Hand Sanitizers Marketed in Kampala, Uganda during the COVID-19 Pandemic

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The complete results of the assay and pH determination of samples of alcohol-based hand sanitizers marketed in Kampala, Uganda are presented in Table 1.

TABLE S1. ASSAY AND pH RESULTS OF ABHS SAMPLES

Sample code	Sample type	% alcohol on label	Content of alcohol (% v/v)						pH
			Glycerine	Methanol	IPA	Ethanol	Total alcohol	Total ethanol + IPA	
UGS 1	Liquid	80	-	-	-	70.5	70.5	70.5	5.8
UGS 2	Liquid	80	-	-	-	62.8	62.8	62.8	5.6
UGS 3	Gel	70	-	-	-	54.1	54.1	54.1	6.3
UGS 4	Liquid	70	-	-	-	63.0	63.0	63.0	5.1
UGS 5	Gel	85	57.4	-	-	27.8	27.8	27.8	6.8
UGS 6	Liquid	70	-	40.8	-	15.7	56.6	15.7	7.0
UGS 7	Gel	N/S	-	-	-	58.7	58.7	58.7	7.4
UGS 8	Liquid	80	-	98.0	-	-	98.0	-	7.7
UGS 9	Liquid	80	-	-	-	78.2	78.2	78.2	4.7
UGS 10	Liquid	80	-	-	-	82.0	82.0	82.0	5.4
UGS 11	Gel	70	-	-	-	51.5	51.5	51.5	6.4
UGS 12	Liquid	70	29.2	-	-	71.3	71.3	71.3	4.7
UGS 13	Liquid	75	-	-	-	64.1	64.1	64.1	6.5
UGS 14	Gel	75	-	-	-	61.7	61.7	61.7	5.5
UGS 15	Liquid	75	-	-	-	47.7	47.7	47.7	4.1

Sample code	Sample type	% alcohol on label	Content of alcohol (% v/v)						pH
			Glycerine	Methanol	IPA	Ethanol	Total alcohol	Total ethanol + IPA	
UGS 16	Liquid	70	-	-	-	59.2	59.2	59.2	7.9
UGS 17	Liquid	70	-	-	-	58.4	58.4	58.4	8.1
UGS 18	Liquid	80	-	80.1	-	-	80.1	-	7.3
UGS 19	Liquid	70	-	-	-	80.3	80.3	80.3	4.1
UGS 20	Liquid	76.8	-	-	-	65.0	65.0	65.0	5.6
UGS 21	Liquid	80	-	-	-	77.9	77.9	77.9	8.7
UGS 22	Liquid	80	-	-	-	82.8	82.8	82.8	6.9
UGS 23	Gel	80	-	-	-	69.5	69.5	69.5	7.6
UGS 24	Liquid	80	-	25.7	-	28.3	54.0	28.3	4.2
UGS 25	Liquid	80	-	-	-	39.6	39.6	39.6	5.7
UGS 26	Gel	72	-	-	-	70.1	70.1	70.1	7.0
UGS 27	Liquid	80	-	-	-	67.4	67.4	67.4	2.6
UGS 28	Liquid	72.6	-	-	-	58.9	58.9	58.9	4.3
UGS 29	Liquid	65	-	-	-	64.5	64.5	64.5	5.1
UGS 30	Liquid	70	-	-	-	59.7	59.7	59.7	7.1
UGS 31	Gel	72.5	-	-	-	22.0	22.0	22.0	5.5
UGS 32	Liquid	77	-	-	-	82.2	82.2	82.2	5.9
UGS 33	Gel	N/S	-	-	-	51.1	51.1	51.1	6.2
UGS 34	Liquid	80	-	-	-	61.5	61.5	61.5	8.1
UGS 35	Gel	80	-	-	6.2	32.9	39.1	39.1	6.9
UGS 36	Liquid	80	-	-	-	79.9	79.9	79.9	5.1
UGS 37	Liquid	75	-	-	-	67.9	67.9	67.9	7.5
UGS 38	Liquid	75	-	-	-	67.4	67.4	67.4	6.8
UGS 39	Liquid	70	-	-	-	62.3	62.3	62.3	7.7
UGS 40	Liquid	80	-	-	-	61.5	61.5	61.5	7.8
UGS 41	Gel	75	-	-	-	54.5	54.5	54.5	6.3

Sample code	Sample type	% alcohol on label	Content of alcohol (% v/v)						pH
			Glycerine	Methanol	IPA	Ethanol	Total alcohol	Total ethanol + IPA	
UGS 42	Liquid	70	-	-	89.2	-	89.2	89.2	8.3
UGS 43	Liquid	N/S	4.5	83.0	-	-	83.0	-	8.9
UGS 44	Gel	N/S	-	-	-	69.4	69.4	69.4	7.3
UGS 45	Gel	62	-	-	-	-	-	-	5.6
UGS 46	Liquid	70	-	-	-	54.7	54.7	54.7	6.5
UGS 47	Gel	62	-	-	-	9.3	9.3	9.3	7.9
UGS 48	Gel	75	-	-	-	55.5	55.5	55.5	7.4
UGS 49	Gel	N/S	-	-	-	51.9	51.9	51.9	7.1
UGS 50	Liquid	80	-	-	-	64.8	64.8	64.8	5.0
UGS 51	Liquid	80	-	-	-	49.2	49.2	49.2	6.4
UGS 52	Liquid	70	-	-	-	64.8	64.8	64.8	5.4
UGS 53	Gel	76	-	-	-	70.6	70.6	70.6	6.1
UGS 54	Liquid	70	-	-	-	61.9	61.9	61.9	6.8
UGS 55	Gel	80	-	-	-	46.1	46.1	46.1	7.9
UGS 56	Liquid	N/S	4.9	84.8	-	-	84.8	-	5.7
UGS 57	Liquid	75	-	-	-	65.7	65.7	65.7	4.4
UGS 58	Gel	80	-	-	-	50.7	50.7	50.7	8.3
UGS 59	Liquid	70	-	-	-	72.4	72.4	72.4	8.7
UGS 60	Liquid	70	-	-	-	80.5	80.5	80.5	4.9
UGS 61	Liquid	70	-	-	-	76.3	76.3	76.3	4.7
UGS 62	Liquid	70	-	-	-	79.6	79.6	79.6	4.7
UGS 63	Liquid	70	-	-	-	75.0	75.0	75.0	5.2
UGS 64	Liquid	N/S	5.3	-	46.4	-	46.4	46.4	4.5
UGS 65	Liquid	64	-	-	-	66.2	66.2	66.2	6.0
UGS 66	Liquid	70	-	-	-	62.1	62.1	62.1	5.0
UGS 67	Liquid	N/S	-	-	25.5	73.5	99.0	131.1	4.9

Sample code	Sample type	% alcohol on label	Content of alcohol (% v/v)						pH
			Glycerine	Methanol	IPA	Ethanol	Total alcohol	Total ethanol + IPA	
UGS 68	Gel	N/S	-	-	-	68.3	68.3	68.3	8.0
UGS 69	Liquid	70	-	-	-	39.1	39.1	39.1	6.8
UGS 70	Liquid	70	-	-	-	49.2	49.2	49.2	8.0
UGS 71	Gel	75	-	-	-	56.7	56.7	56.7	5.0
UGS 72	Gel	70	-	-	-	63.6	63.6	63.6	7.3
UGS 73	Liquid	70	-	-	-	58.9	58.9	58.9	4.1
UGS 74	Liquid	80	-	-	-	36.2	36.2	36.2	3.4
UGS 75	Liquid	75	-	-	-	57.0	57.0	57.0	4.8
UGS 76	Liquid	70	-	-	-	58.8	58.8	58.8	5.8
UGS 77	Liquid	N/S	-	-	-	-	-	-	7.2
UGS 78	Liquid	70	-	-	-	68.1	68.1	68.1	5.8
UGS 79	Liquid	80	-	-	-	60.3	60.3	60.3	4.9
UGS 80	Gel	75	-	-	-	59.0	59.0	59.0	5.6
UGS 81	Gel	70	-	-	56.5	-	56.5	56.5	7.4
UGS 82	Liquid	60	-	-	-	67.0	67.0	67.0	3.8
UGS 83	Liquid	75	-	-	-	70.4	70.4	70.4	4.9
UGS 84	Gel	75	-	-	-	71.8	71.8	71.8	4.7
UGS 85	Liquid	75	-	-	-	63.0	63.0	63.0	7.4
UGS 86	Gel	60	-	-	57.3	-	57.3	57.3	7.3
UGS 87	Gel	65	-	-	-	60.5	60.5	60.5	6.3
UGS 88	Gel	60+	-	-	-	61.9	61.9	61.9	7.1
UGS 89	Liquid	80	-	-	47.4	-	47.4	47.4	7.5
UGS 90	Liquid	75	-	-	-	55.4	55.4	55.4	5.8
UGS 91	Liquid	80	-	-	-	75.6	75.6	75.6	4.9
UGS 92	Liquid	80	-	-	-	67.7	67.7	67.7	6.2
UGS 93	Liquid	67	-	-	-	62.5	62.5	62.5	3.6

Sample code	Sample type	% alcohol on label	Content of alcohol (% v/v)						pH
			Glycerine	Methanol	IPA	Ethanol	Total alcohol	Total ethanol + IPA	
UGS 94	Liquid	80	-	-	-	63.2	63.2	63.2	5.6
UGS 95	Gel	N/S	-	-	-	51.7	51.7	51.7	6.4
UGS 96	Liquid	80	-	-	-	57.4	57.4	57.4	7.3
UGS 97	Liquid	N/S	-	-	-	66.7	66.7	66.7	6.3
UGS 98	Liquid	70	-	-	-	63.0	63.0	63.0	6.0
UGS 99	Liquid	70	-	-	-	79.0	79.0	79.0	6.3
UGS 100	Liquid	70	-	-	-	64.4	64.4	64.4	5.8
UGS 101	Gel	70	-	-	-	12.2	12.2	12.2	7.5
UGS 102	Gel	62	-	-	-	70.8	70.8	70.8	6.0
UGS 103	Gel	70	-	-	-	63.4	63.4	63.4	7.6
UGS 104	Liquid	80	-	-	-	72.3	72.3	72.3	6.3
UGS 105	Liquid	74.5	6.9	-	-	66.0	66.0	66.0	3.7
UGS 106	Liquid	80	-	80.3	-	-	80.3	-	6.9
UGS 107	Liquid	80	-	-	-	80.4	80.4	80.4	7.5
UGS 108	Liquid	70	-	-	-	59.6	59.6	59.6	6.8
UGS 109	Gel	70	-	-	-	48.0	48.0	48.0	6.9
UGS 110	Liquid	70	-	-	-	83.3	83.3	83.3	4.5
UGS 111	Liquid	70	-	-	-	95.1	95.1	95.1	5.3
UGS 112	Liquid	80	-	-	-	71.4	71.4	71.4	4.2
UGS 113	Liquid	75	-	-	-	70.2	70.2	70.2	3.9
UGS 114	Liquid	70	-	-	-	53.2	53.2	53.2	4.0
UGS 115	Liquid	75	-	-	-	67.6	67.6	67.6	7.6
UGS 116	Liquid	70	-	-	-	61.2	61.2	61.2	4.5
UGS 117	Liquid	70	-	-	-	66.5	66.5	66.5	4.8
UGS 118	Liquid	N/S	-	-	-	62.2	62.2	62.2	6.8
UGS 119	Gel	70	-	-	-	62.3	62.3	62.3	6.6

Sample code	Sample type	% alcohol on label	Content of alcohol (% v/v)						pH
			Glycerine	Methanol	IPA	Ethanol	Total alcohol	Total ethanol + IPA	
UGS 120	Liquid	75	-	-	7.6	55.7	63.3	63.3	6.6
UGS 121	Liquid	80	-	-	-	76.5	76.5	76.5	6.4
UGS 122	Liquid	80	-	-	-	55.6	55.6	55.6	7.3
UGS 123	Gel	80	-	-	-	48.5	48.5	48.5	5.2
UGS 124	Gel	70	-	-	-	21.7	21.7	21.7	6.0
UGS 125	Liquid	75	-	-	-	62.9	62.9	62.9	4.5
UGS 126	Liquid	N/S	-	-	3.7	29.4	33.1	33.1	7.2
UGS 127	Liquid	70	-	-	-	65.4	65.4	65.4	3.6
UGS 128	Liquid	N/S	-	-	-	71.5	71.5	71.5	4.8
UGS 129	Liquid	80	-	-	-	65.0	65.0	65.0	4.6
UGS 130	Liquid	80	-	-	-	67.4	67.4	67.4	5.4

Key: N/S = not stated, IPA = isopropyl alcohol