Table A-5 *Critical U-values of the Mann-Whitney distribution* (***α = .025*** *and* ***α = .05***)

		n_2																	
n_1	α	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
3	.025	0	0	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
	.05	1	1	2	3	3	4	5	5	6	6	7	8	8	9	10	10	11	12
4	.025	0	1	2	3	4	5	5	6	7	8	9	10	11	12	12	13	14	15
	.05	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19
5	.025	1	2	3	4	6	7	8	9	10	12	13	14	15	16	18	19	20	21
	.05	2	3	5	6	7	9	10	12	13	14	16	17	19	20	21	23	24	26
6	.025	2	3	4	6	7	9	11	12	14	15	17	18	20	22	23	25	26	28
	.05	3	4	6	8	9	11	13	15	17	18	20	22	24	26	27	29	31	33
7	.025	2	4	6	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35
	.05	3	5	7	9	12	14	16	18	20	22	25	27	29	31	34	36	38	40
8	.025	3	5	7	9	11	14	16	18	20	23	25	27	30	32	35	37	39	42
	.05	4	6	9	11	14	16	19	21	24	27	29	32	34	37	40	42	45	48
9	.025	3	5	8	11	13	16	18	21	24	27	29	32	35	38	40	43	46	49
	.05	5	7	10	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55
10	.025	4	6	9	12	15	18	21	24	27	30	34	37	40	43	46	49	53	56
	.05	5	8	12	15	18	21	25	28	32	35	38	42	45	49	52	56	59	63
11	.025	4	7	10	14	17	20	24	27	31	34	38	41	45	48	52	56	59	63
	.05	6	9	13	17	20	24	28	32	35	39	43	47	51	55	58	62	66	70
12	.025	5	8	12	15	19	23	27	30	34	38	42	46	50	54	58	62	66	70
	.05	6	10	14	18	22	27	31	35	39	43	48	52	56	61	65	69	73	78
13	.025	5	9	13	17	21	25	29	34	38	42	46	51	55	60	64	68	73	77
	.05	7	11	16	20	25	29	34	38	43	48	52	57	62	66	71	76	81	85
14	.025	6	10	14	18	23	27	32	37	41	46	51	56	60	65	70	75	79	84
	.05	8	12	17	22	27	32	37	42	47	52	57	62	67	72	78	83	88	93
15	.025	6	11	15	20	25	30	35	40	45	50	55	60	65	71	76	81	86	91
	.05	8	13	19	24	29	34	40	45	51	56	62	67	73	78	84	89	95	101
16	.025	7	12	16	22	27	32	38	43	48	54	60	65	71	76	82	87	93	99
	.05	9	15	20	26	31	37	43	49	55	61	66	72	78	84	90	96	102	108
17	.025	7	12	18	23	29	35	40	46	52	58	64	70	76	82	88	94	100	106
	.05	10	16	21	27	34	40	46	52	58	65	71	78	84	90	97	103	110	116
18	.025	8	13	19	25	31	37	43	49	56	62	68	75	81	87	94	100	107	113
	.05	10	17	23	29	36	42	49	56	62	69	76	83	89	96	103	110	117	124
19	.025	8	14	20	26	33	39	46	53	59	66	73	79	86	93	100	107	114	120
	.05	11	18	24	31	38	45	52	59	66	73	81	88	95	102	110	117	124	131
20	.025	9	15	21	28	35	42	49	56	63	70	77	84	91	99	106	113	120	128
	.05	12	19	26	33	40	48	55	63	70	78	85	93	101	108	116	124	131	139

Source: Verdooren, L. R. (1963). Extended tables of critical values for Wilcoxon's test statistic. *Biometrika, 50*(1/2), 177-186.

Note. To reject the null hypothesis at the level of significance α, the *critical value* of *U* provided in this table must be *greater* than the computed value of *U* (the smaller number of U_1 and U_2 — see Formulas 12.1 and 12.2, respectively, in Chapter 12). Keep in mind that (a) α = .025 is used for one-sided test with α = .025 or two-sided test with α = .05, and (b) α = .05 is used for one-sided test with α = .05 or two-sided test with α = .10.