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## **BLUE CRAB SHEDDING SYSTEMS:**

**Determining Water Volume &  
Preparing Artificial Seawater**



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**APPROXIMATE AMOUNT OF SALT IN POUNDS AND OUNCES TO BE ADDED TO A GIVEN AMOUNT OF WATER  
TO OBTAIN THE DESIRED SALINITY<sup>1</sup>  
THIS TABLE IS BASED ON .00834519 POUNDS OF SALT FOR ONE GALLON TO OBTAIN 1 PPT**

SALINITY IN PARTS PER THOUSAND <sup>2</sup>																																				
Number of Gallons	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18	
	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ	LBS	OZ
1		0.1		0.3		0.4		0.5		0.7		0.8		0.9		1.1		1.2		1.3		1.5		1.6		1.7		1.9		2.0		2.1		2.3		2.4
2		0.3		0.5		0.8		1.1		1.3		1.6		1.9		2.1		2.4		2.7		2.9		3.2		3.5		3.7		4.0		4.3		4.5		4.8
3		0.4		0.8		1.2		1.6		2.0		2.4		2.8		3.2		3.6		4.0		4.4		4.8		5.2		5.6		6.0		6.4		6.8		7.2
4		0.5		1.1		1.6		2.1		2.7		3.2		3.7		4.3		4.8		5.3		5.9		6.4		6.9		7.5		8.0		8.5		9.1		9.6
5		0.7		1.3		2.0		2.7		3.3		4.0		4.7		5.3		6.0		6.7		7.3		8.0		8.7		9.3		10.0		10.7		11.3		12.0
10		1.3		2.7		4.0		5.3		6.7		8.0		9.3		10.7		12.0		13.4		14.7	1	0.0	1	1.4	1	2.7	1	4.0	1	5.4	1	6.7	1	8.0
20		2.7		5.3		8.0		10.7		13.4	1	0.0	1	2.7	1	5.4	1	8.0	1	10.7	1	13.4	2	0.0	2	2.7	2	5.4	2	8.1	2	10.7	2	13.4	3	0.1
30		4.0		8.0		12.0	1	0.0	1	4.0	1	8.0	1	12.0	2	0.0	2	4.1	2	8.1	2	12.1	3	0.1	3	4.1	3	8.1	3	12.1	4	0.1	4	4.1	4	8.1
40		5.3		10.7	1	0.0	1	5.4	1	10.7	2	0.0	2	5.4	2	10.7	3	0.1	3	5.4	3	10.8	4	0.1	4	5.4	4	10.8	5	0.1	5	5.5	5	10.8	6	0.1
50		6.7		13.4	1	4.0	1	10.7	2	1.4	2	8.1	2	14.7	3	5.4	3	12.1	4	2.8	4	9.4	5	0.1	5	6.8	5	13.5	6	4.1	6	10.8	7	1.5	7	8.2
60		8.0	1	0.0	1	8.0	2	0.0	2	8.1	3	0.1	3	8.1	4	0.1	4	8.1	5	0.1	5	8.1	6	0.1	6	8.1	7	0.2	7	8.2	8	0.2	8	8.2	9	0.2
70		9.3	1	2.7	1	12.0	2	5.4	2	14.7	3	8.1	4	1.4	4	10.8	5	4.1	5	13.5	6	6.8	7	0.2	7	9.5	8	2.9	8	12.2	9	5.5	9	14.9	10	8.2
80		10.7	1	5.4	2	0.0	2	10.7	3	5.4	4	0.1	4	10.8	5	5.5	6	0.1	6	10.8	7	5.5	8	0.2	8	10.9	9	5.5	10	0.2	10	10.9	11	5.6	12	0.3
90		12.0	1	8.0	2	4.1	3	0.1	3	12.1	4	8.1	5	4.1	6	0.1	6	12.2	7	8.2	8	4.2	9	0.2	9	12.2	10	8.2	11	4.3	12	0.3	12	12.3	13	8.3
100		13.4	1	10.7	2	8.1	3	5.4	4	2.8	5	0.1	5	13.5	6	10.8	7	8.2	8	5.5	9	2.9	10	0.2	10	13.6	11	10.9	12	8.3	13	5.6	14	3.0	15	0.3
150	1	4.0	2	8.1	3	12.1	5	0.1	6	4.1	7	8.2	8	12.2	10	0.2	11	4.3	12	8.3	13	12.3	15	0.3	16	4.4	17	8.4	18	12.4	20	0.5	21	4.5	22	8.5
200	1	10.7	3	5.4	5	0.1	6	10.8	8	5.5	10	0.2	11	10.9	13	5.6	15	0.3	16	11.0	18	5.8	20	0.5	21	11.2	23	5.9	25	0.6	26	11.3	28	6.0	30	0.7
250	2	1.4	4	2.8	6	4.1	8	5.5	10	6.9	12	8.3	14	9.7	16	11.0	18	12.4	20	13.8	22	15.2	25	0.6	27	1.9	29	3.3	31	4.7	33	6.1	35	7.5	37	8.9
300	2	8.1	5	0.1	7	8.2	10	0.2	12	8.3	15	0.3	17	8.4	20	0.5	22	8.5	25	0.6	27	8.6	30	0.7	32	8.7	35	0.8	37	8.9	40	0.9	42	9.0	45	1.0
350	2	14.7	5	13.5	8	12.2	11	10.9	14	9.7	17	8.4	20	7.1	23	5.9	26	4.6	29	3.3	32	2.1	35	0.8	37	15.5	40	14.3	43	13.0	46	11.7	49	10.5	52	9.2
400	3	5.4	6	10.8	10	0.2	13	5.6	16	11.0	20	0.5	23	5.9	26	11.3	30	0.7	33	6.1	36	11.5	40	0.9	43	6.3	46	11.7	50	1.1	53	6.5	56	12.0	60	1.4
450	3	12.1	7	8.2	11	4.3	15	0.3	18	12.4	22	8.5	26	4.6	30	0.7	33	12.8	37	8.9	41	4.9	45	1.0	48	13.1	52	9.2	56	5.3	60	1.4	63	13.5	67	9.5
500	4	2.8	8	5.5	12	8.3	16	11.0	20	13.8	25	0.6	29	3.3	33	6.1	37	8.9	41	11.6	45	14.4	50	1.1	54	3.9	58	6.7	62	9.4	66	12.2	70	14.9	75	1.7
550	4	9.4	9	2.9	13	12.3	18	5.8	22	15.2	27	8.6	32	2.1	36	11.5	41	4.9	45	14.4	50	7.8	55	1.3	59	10.7	64	4.1	68	13.6	73	7.0	78	0.4	82	9.9
600	5	0.1	10	0.2	15	0.3	20	0.5	25	0.6	30	0.7	35	0.8	40	0.9	45	1.0	50	1.1	55	1.3	60	1.4	65	1.5	70	1.6	75	1.7	80	1.8	85	1.9	90	2.0
650	5	6.8	10	13.6	16	4.4	21	11.2	27	1.9	32	8.7	37	15.5	43	6.3	48	13.1	54	3.9	59	10.7	65	1.5	70	8.3	75	15.1	81	5.8	86	12.6	92	3.4	97	10.2
700	5	13.5	11	10.9	17	8.4	23	5.9	29	3.3	35	0.8	40	14.3	46	11.7	52	9.2	58	6.7	64	4.1	70	1.6	75	15.1	81	12.5	87	10.0	93	7.5	99	4.9	105	2.4
750	6	4.1	12	8.3	18	12.4	25	0.6	31	4.7	37	8.9	43	13.0	50	1.1	56	5.3	62	9.4	68	13.6	75	1.7	81	5.8	87	10.0	93	14.1	100	2.3	106	6.4	112	10.6
800	6	10.8	13	5.6	20	0.5	26	11.3	33	6.1	40	0.9	46	11.7	53	6.5	60	1.4	66	12.2	73	7.0	80	1.8	86	12.6	93	7.5	100	2.3	106	13.1	113	7.9	120	2.7
850	7	1.5	14	3.0	21	4.5	28	6.0	35	7.5	42	9.0	49	10.5	56	12.0	63	13.5	70	14.9	78	0.4	85	1.9	92	3.4	99	4.9	106	6.4	113	7.9	120	9.4	127	10.9
900	7	8.2	15	0.3	22	8.5	30	0.7	37	8.9	45	1.0	52	9.2	60	1.4	67	9.5	75	1.7	82	9.9	90	2.0	97	10.2	105	2.4	112	10.6	120	2.7	127	10.9	135	3.1
950	7	14.8	15	13.7	23	12.5	31	11.4	39	10.2	47	9.1	55	7.9	63	6.8	71	5.6	79	4.5	87	3.3	95	2.2	103	1.0	110	15.9	118	14.7	126	13.5	134	12.4	142	11.2
1000	8	5.5	16	11.0	25	0.6	33	6.1	41	11.6	50	1.1	58	6.7	66	12.2	75	1.7	83	7.2	91	12.8	100	2.3	108	7.8	116	13.3	125	2.8	133	8.4	141	13.9	150	3.4

<sup>1</sup>Values in this table were determined using Rila Marine Mix<sup>®</sup>. Based on information supplied by the manufacturer, these values should be approximately the same for Instant Ocean<sup>®</sup> and Utikleen Sea-water Compound<sup>®</sup>.

<sup>2</sup>Your salinity may vary slightly depending upon water hardness and instrumentation.

<sup>®</sup>Does not imply endorsement.

Table developed by Walter T. Brehm, James T. McBee, and James Y. Christmas III of the Gulf Coast Research Laboratory, Ocean Springs, Mississippi.

# Determining Water Volume

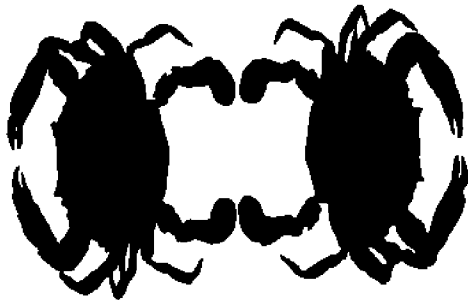
To calculate the number of gallons in a tank, multiply the tank dimensions (length x width) by the desired water level. Make sure all dimensions are in the same unit of measurement. A 3' x 6' tank with 4" (1/3') of water would contain 6 cubic feet of water.

$$3' \times 6' \times 1/3' = 6 \text{ ft}^3$$

To convert cubic feet to gallons, multiply the number of cubic feet of water by 7.5. (There are 7.5 gallons of water in one cubic foot.)

$$6 \text{ ft}^3 \times 7.5 = 45 \text{ gallons}$$

To determine the number of gallons in the entire system, multiply the number of gallons in one tank by the total number of tanks. If tank dimensions within the system vary, calculate the volumes separately and add them to determine total capacity.



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# Suggestions

- Know the quality of your freshwater supply. Chemical and bacteriological analyses should be made if you suspect problems with the quality of the available water.
- Municipal tap water should be aerated for three days to remove chlorine.
- Do not prepare artificial seawater in metal containers.
- Common table salt or rock salt is not recommended for use.
- Keep unused salt tightly sealed in plastic bag for storage.

# Addresses

Rila Marine Mix  
Rila Products  
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Teaneck, New Jersey 07666

Instant Ocean  
Aquarium Systems  
8141 Tyler Blvd.  
Mentor, Ohio 44060

Utikleen Seawater Compound  
Utility Chemical Company  
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