



In order to achieve consistent cleaning results, the user has to ensure the actual concentration of the cleaning agent stays within the recommended application range. Various factors such as “drag-out,” dilution and evaporation can potentially influence the actual concentration. Regular measurements of all process related parameters are therefore highly recommended. The ZESTRON® Bath Analyzer 10 is a simple, easy to use method that **provides reliable and accurate results** for fresh and contaminated cleaning baths.

The user is provided with important information:

1. Evaluation of the cleaning agent concentration
2. Evidence of the cleaning agent alkalinity

The ZESTRON® Bath Analyzer 10 was specifically developed for the following cleaning agents:

- VIGON® A 200, A 201, A 250, A 300
- VIGON® US
- VIGON PE 190A
- ATRON® SP 300
- ATRON® AC 205, AC 207

Be aware:

To ensure consistent cleaning results, ZESTRON encourages users to measure the bath concentration on a regular basis. The ZESTRON® Bath Analyzer 10 is suitable for monitoring the cleaning bath but not the rinsing bath.

Quantity of measurements:

The included 6 bottles of ZESTRON® Bath Analyzer 10 test solution will last for approximately 40 measurements.

Storage:

ZESTRON Bath Analyzer 10 should be stored at a temperature between 5-30°C / 41-86°F. The product has a minimum shelf life of 5 years, when stored at the recommended temperature.

Disposal:

After completion of the measurement, the bath sample can be disposed through the regular sewage system.

The ZESTRON® Bath Analyzer 10 includes:



- 1) PE bottle with injection nozzle
- 2) 2 pairs of vinyl gloves
- 3) Digital thermometer (°C/°F)
- 4) Sampling beaker for taking a bath sample
- 5) Glass cylinder with marking
- 6) 6 x 100ml ZESTRON® Bath Analyzer 10 test solution
- 7) Manual, including correlation charts (not illustrated)

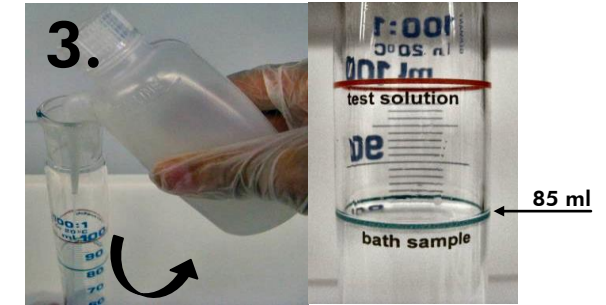
Personal precautions: When using cleaning agents, please wear goggles and gloves!



Take a **well-mixed bath sample (i.e. milky and without phase separation)** from the cleaning bath using the sampling beaker. Make sure to **cool the sample down to room temperature (25°C/77°F)** before performing the test.



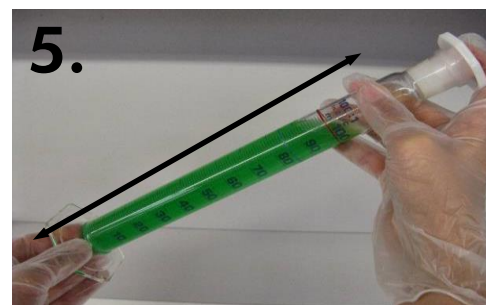
Fill the entire bath sample of **at least 100 ml** into the PE bottle and shake well.



Quickly inject 85 ml of the bath sample into the glass cylinder (see marking) **while continuously shaking the PE bottle** to avoid phase separation.



Fill the cylinder with **15 ml** of the ZESTRON® Bath Analyzer 10 test solution to a **total volume of 100 ml**. Make sure to **fill the cylinder carefully up to the mark for both** (bath sample as well as test solution) in order to obtain the correct results.



Close the cylinder and **shake well for 5-10 seconds**.



Wait 10 minutes until the phase separation is completed before evaluating the test.

See the application
video on our website



Nominal condition before measuring

The phase separation is complete **after 10 minutes**. One of the following color codes (Case A or Case B) is obtained:

Case A



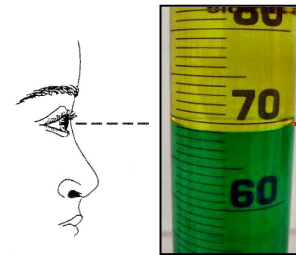
Case B



Note: In both cases A and B, please **measure the concentration first** and then **evaluate the alkalinity**.

1. Evaluation of concentration **ZESTRON** High Precision Cleaning

The chart below demonstrates how to determine the concentration of the cleaning agent using a correlation chart:



Step 1: Read the volume of the bottom phase

Step 2: Determine the concentration via correlation chart

Vol. bottom phase (ml)	Cleaning Agent						Vol. bottom phase (ml)
	ATRON® AC 205	ATRON® AC 207	ATRON® SP 300	VIGON® A 200	VIGON® A 201	VIGON® A 250	
71	29,5 %	23,5 %	18 %	25 %	21 %	24 %	71
70	31 %	24,5 %	19 %	26 %	22 %	25 %	70
69	33 %	26 %	20 %	27 %	23,5 %	26 %	69
68	35 %	27 %	21 %	28 %	25 %	27 %	68
67	36,5 %	28,5 %	22 %	29 %	26 %	28,5 %	67
66	38 %	29,5 %	23 %	30 %	27 %	30 %	66

Evaluation example:

- Bottom phase has a volume of 69 ml
- In the case of VIGON® A 200, the concentration of the cleaning bath is 27 %

Note: If the measured **cleaning bath concentration does not match** the recommended application concentration, **please adjust accordingly with concentrate chemistry**.

2. Evaluation of the alkalinity

The following color codes indicate the alkalinity level of the cleaning agent:



Case A:

Green bottom phase and yellow upper phase

→ **The alkalinity is fine.** Should the cleaning results not be satisfactory contrary to expectations, please contact our process engineers.



Case B:

Blue bottom phase and red upper phase

→ **The alkalinity is too low.** Poor cleaning results are to be expected.

The following steps have to be taken:

- a) Measured concentration is < 10 %:
 - The concentration is too low, therefore the alkalinity is too low
 - **Recommendation:** Increase the concentration or change the cleaning bath

- b) Measured concentration is > 10 %:
 - The alkalinity is too low due to contamination or other factors
 - **Recommendation:** Please contact ZESTRON's Engineering Department for further assistance

Correlation charts for concentration measurements

Vol. bottom phase (ml)	Cleaning Agent						Vol. bottom phase (ml)
	ATRON® AC 205	ATRON® AC 207	ATRON® SP 300	VIGON® A 200	VIGON® A 201	VIGON® A 250	
85	7 %	6,5 %		7 %	5 %	5.5 %	85
84	8,5 %	7,5 %	< 5 %	9 %	6 %	7 %	84
83	10 %	8,5 %	6 %	10 %	7 %	8,5 %	83
82	12 %	10 %	7 %	11 %	8,5 %	10 %	82
81	13,5 %	11 %	8 %	12 %	10 %	12 %	81
80	15 %	12,5 %	9 %	13,5 %	11 %	13,5 %	80
79	16,5 %	13,5 %	10 %	15 %	12 %	15 %	79
78	18 %	15 %	11 %	16,5 %	13 %	16 %	78
77	20 %	16 %	12 %	18 %	14 %	17,5 %	77
76	22 %	17,5 %	13 %	19 %	15.5 %	19 %	76
75	23,5 %	18,5 %	14 %	20 %	17 %	20 %	75
74	25 %	19,5 %	15 %	21,5 %	18 %	21 %	74
73	26 %	21 %	16 %	23 %	19 %	22 %	73
72	28 %	22 %	17 %	24 %	20 %	23 %	72
71	29,5 %	23,5 %	18 %	25 %	21 %	24 %	71
70	31 %	24,5 %	19 %	26 %	22 %	25 %	70
69	33 %	26 %	20 %	27 %	23,5 %	26 %	69
68	35 %	27 %	21 %	28 %	25 %	27 %	68
67	36,5 %	28,5 %	22 %	29 %	26 %	28,5 %	67
66	38 %	29,5%	23 %	30 %	27 %	30 %	66
65	39,5 %	30,5 %	24 %	31 %	28 %	31 %	65
64	41 %	32 %	25 %	32 %	29 %	32 %	64
63	42,5 %	33 %	26 %	33 %	30 %	33 %	63
62	44 %	34,5 %	27 %	34 %	31,5 %	34 %	62
61	45,5 %	35,5 %	28 %	34,5 %	33 %	35 %	61
60	47 %	37 %	29 %	35 %	34 %	36 %	60
59	48,5 %	38 %	30 %	36 %	35 %	37 %	59
58	50 %	39 %	31 %	37 %	36 %	38 %	58
57		40,5 %	32 %	38,5 %	37 %	39 %	57
56		41,5 %	33 %	39 %	38 %	40 %	56
55		43 %	34 %	39,5 %	39 %	41 %	55
54			35 %	40 %	40 %	42 %	54
53			36 %	41 %	41,5 %	43 %	53
52			37 %	42 %	43 %	44 %	52
51			38 %	43 %	44 %	45 %	51
50			39 %	44 %	45 %	46 %	50
≤ 50			≥ 40 %	≥ 44 %	≥ 45 %	≥ 46 %	≤ 50

Should you have any questions, please contact our Application Technology Department:
Phone: +49 (841) 63526 | techsupport@zestron.com

Correlation charts for concentration measurements

Vol. bottom Phase (ml)	Cleaning Agent			Vol. bottom Phase (ml)
	VIGON® PE 190A	VIGON® A 300	VIGON® US	
85		5 %	7 %	85
84		6 %	9 %	84
83		7,5 %	10 %	83
82		9 %	11 %	82
81		10 %	12 %	81
80	10	11 %	13,5 %	80
79	11	12 %	15 %	79
78	12	13 %	16,5 %	78
77	13	14,5 %	18 %	77
76	14	16 %	19 %	76
75	15	17 %	20 %	75
74	16	18 %	21,5 %	74
73	17	19 %	23 %	73
72	18	20 %	24 %	72
71	19	21 %	25 %	71
70	20	22 %	26 %	70
69	21	23 %	27 %	69
68	22	24 %	28 %	68
67	23	25,5 %	29 %	67
66	24	27 %	30 %	66
65	25	28 %	31 %	65
64	26	29 %	32 %	64
63	27	30 %	33 %	63
62	28	31 %	34 %	62
61	29	32 %	34,5 %	61
60	30	33 %	35 %	60
59	31	34 %	36 %	59
58	32	35 %	37 %	58
57	33	36 %	38,5 %	57
56	34	36,5 %	39 %	56
55	35	37 %	39,5 %	55
54	36	38 %	40 %	54
53	37	39 %	41 %	53
52	38	40 %	42 %	52
51	39	41,5 %	43 %	51
50	40	43 %	44 %	50
≤ 50	41	≥43 %	≥ 44 %	≤ 50

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