

# **ZESTRON® Bath Analyzer 10**

## **DOCUMENTATION**

- **Deutsch**
- **English**
- **Français**



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# ZESTRON® Bath Analyzer 10



## Area of Application:



In order to achieve consistent cleaning results, the user has to ensure that 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 which **provides reliable and accurate results** for fresh and especially contaminated cleaning baths. The user is given important information:

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

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

- ATRON® AC 205
- VIGON® A 200, A 201, A 250, A 300
- VIGON® US

### Be aware:

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

### Quantity of measurements:

The included 6 bottles of ZESTRON® Bath Analyzer 10 test solution will last for approx. 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 2 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 pair of vinyl gloves
- 3) Sampling beaker for taking a bath sample
- 4) Glass cylinder with marking
- 5) 6 x 100ml ZESTRON® Bath Analyzer 10 test solution
- 6) Manual, including correlation charts (not illustrated)

## Application Recommendation:

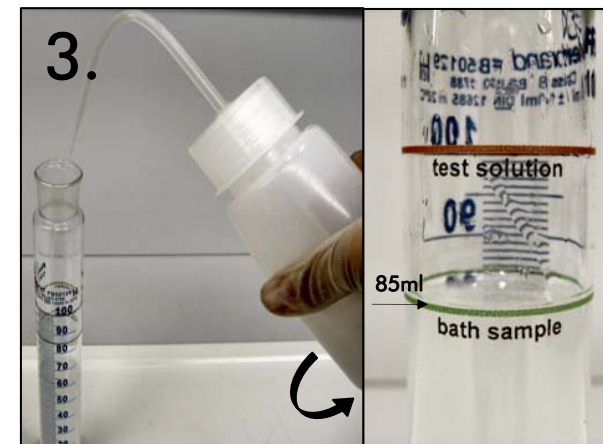
Personal precautions: Using cleaning agents please wear goggles and gloves!



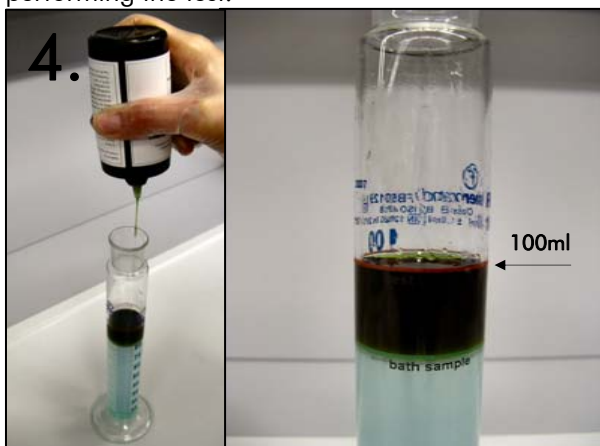
1. Take a **well mixed bath sample** (i.e. milky and **without phase separation**) from the cleaning bath using the sampling beaker. Make sure to **cool the sample down to room temperature** before performing the test.



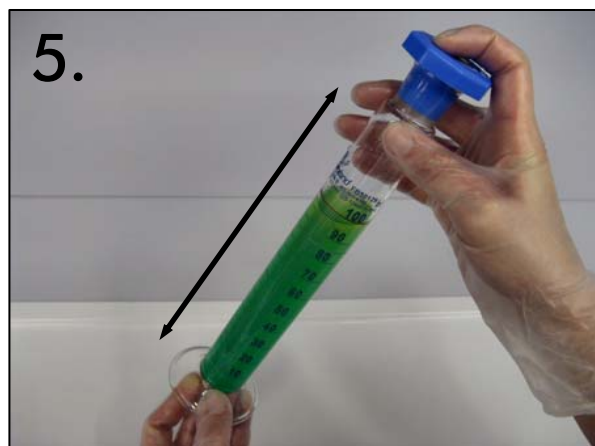
2. Fill the entire bath sample of **at least 100ml** into the PE bottle and shake well.



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



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



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



6. **Wait subsequently for 10 minutes** until phase separation is completed before evaluating the test.

# ZESTRON® Bath Analyzer 10



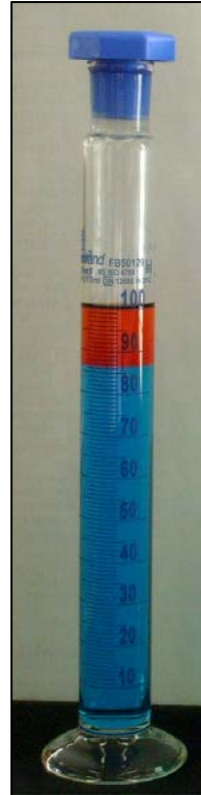
## Nominal condition of the cleaning agent before measuring:

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

Case A



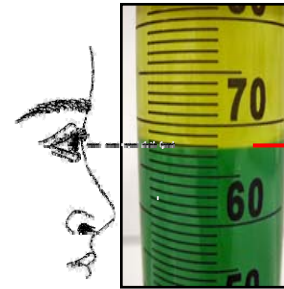
Case B



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

## 1. Evaluation of the concentration:

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

Cleaning Agent Vol. bottom phase (ml)	ATRON® AC 205	VIGON® A 200	VIGON® A 201	VIGON® A 250	VIGON® A 300	VIGON® US
71	29.5 %	25 %	21 %	24 %	21 %	25 %
70	31 %	26 %	22 %	25 %	22 %	26 %
69	33 %	27 %	23.5 %	26 %	23 %	27 %
68	35 %	28 %	25 %	27 %	24 %	28 %
67	36.5 %	29 %	26 %	28.5 %	25.5 %	29 %
66	38 %	30 %	27 %	30 %	27 %	30 %

**Evaluation example:**

→ Bottom phase has a volume of 68ml

→ In case of VIGON® US the concentration of the cleaning bath is 28 %

**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 satisfying 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 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 measurement:

Cleaning Agent Vol. bottom phase (ml)	ATRON® AC 205	VIGON® A 200	VIGON® A 201	VIGON® A 250	VIGON® A 300	VIGON® US
	86	5 %	5 %	3.5 %	4 %	4 %
85	7 %	7 %	5 %	5.5 %	5 %	7 %
84	8.5 %	9 %	6 %	7 %	6 %	9 %
83	10 %	10 %	7 %	8.5 %	7.5 %	10 %
82	12 %	11 %	8.5 %	10 %	9 %	11 %
81	13.5 %	12 %	10 %	12 %	10 %	12 %
80	15 %	13.5 %	11 %	13.5 %	11 %	13.5 %
79	16.5 %	15 %	12 %	15 %	12 %	15 %
78	18 %	16.5 %	13 %	16 %	13 %	16.5 %
77	20 %	18 %	14 %	17.5 %	14.5 %	18 %
76	22 %	19 %	15.5 %	19 %	16 %	19 %
75	23.5 %	20 %	17 %	20 %	17 %	20 %
74	25 %	21.5 %	18 %	21 %	18 %	21.5 %
73	26 %	23 %	19 %	22 %	19 %	23 %
72	28 %	24 %	20 %	23 %	20 %	24 %
71	29.5 %	25 %	21 %	24 %	21 %	25 %
70	31 %	26 %	22 %	25 %	22 %	26 %
69	33 %	27 %	23.5 %	26 %	23 %	27 %
68	35 %	28 %	25 %	27 %	24 %	28 %
67	36.5 %	29 %	26 %	28.5 %	25.5 %	29 %
66	38 %	30 %	27 %	30 %	27 %	30 %
65	39.5 %	31 %	28 %	31 %	28 %	31 %
64	41 %	32 %	29 %	32 %	29 %	32 %
63	42.5 %	33 %	30 %	33 %	30 %	33 %
62	44 %	34 %	31.5 %	34 %	31 %	34 %
61	45.5 %	34.5 %	33 %	35 %	32 %	34.5 %
60	47 %	35 %	34 %	36 %	33 %	35 %
59	48.5 %	36 %	35 %	37 %	34 %	36 %
58	50 %	37 %	36 %	38 %	35 %	37 %
57		38.5 %	37 %	39 %	36 %	38.5 %
56		39 %	38 %	40 %	36.5 %	39 %
55		39.5 %	39 %	41 %	37 %	39.5 %
54		40 %	40 %	42 %	38 %	40 %
53		41 %	41.5 %	43 %	39 %	41 %
52		42 %	43 %	44 %	40 %	42 %
51		43 %	44 %	45 %	41.5 %	43 %
50		44 %	45 %	46 %	43 %	44 %
< 50		> 44 %	> 45 %	> 46 %	> 43 %	> 44 %

APPLICATION CONCENTRATION RANGE