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 20 is a simple, easy-to-use method which **provides reliable and accurate concentration measurements** for fresh as well as for contaminated cleaning baths.

The ZESTRON® Bath Analyzer 20 was specifically developed for the following cleaning agents:

- VIGON® SC 200, SC 202, SC 210
- VIGON® N 600, N 640, N 680
- VIGON® PE 180, PE 200, PE 215N
- VIGON® TC 150
- VIGON® PM 105
- VIGON® 1000-CR
- HYDRON® SE 220, SE 230A, SC 300
- ATRON® DC
- ZESTRON® VD 200

Be aware:
To ensure consistent cleaning results, ZESTRON encourages users to measure the bath concentration on a regular basis. The ZESTRON® Bath Analyzer 20 is suitable for monitoring the cleaning bath but not the rinsing bath.

Quantity of measurements:
The included 6 bottles of ZESTRON® Bath Analyzer 20 test solution will last for approximately 40 measurements.

Storage:
ZESTRON® Bath Analyzer 20 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 20 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 20 test solution
7) Manual, including correlation charts (not illustrated)

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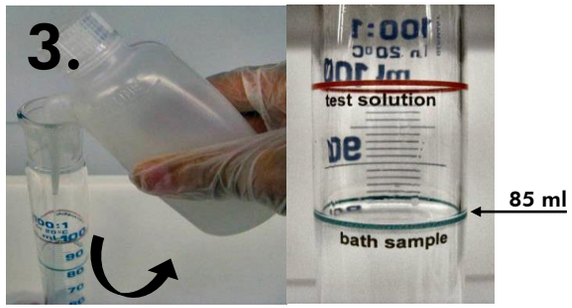
Application Recommendation

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

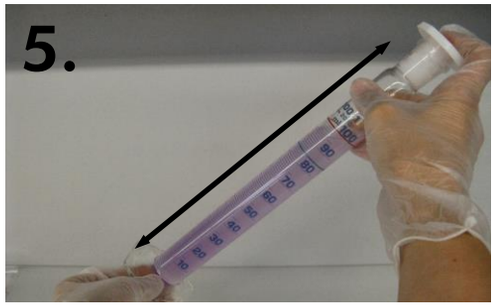
Take a **well-mixed bath sample (i.e. milky and without phase separation)** from the cleaning bath using the sampling beaker. Make sure to **cool the sample down to room temperature** before performing the test.

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

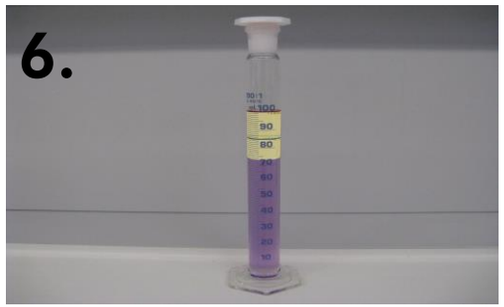


Quickly inject 85 ml of the bath sample into the glass cylinder (see marking) **while continuously shaking the PE bottle** to avoid phase separation.

Fill the cylinder with **15 ml** of the ZESTRON® Bath Analyzer 20 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

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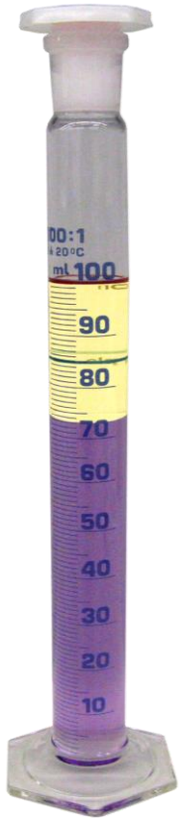
Nominal condition before measuring

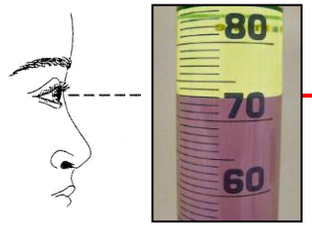
The phase separation is completed **after 10 minutes** of waiting time. The following colour code is obtained.



Note: The upper phase is yellowish and the bottom phase is purple.

Evaluation 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 the correlation chart

Vol. bottom phase (ml)	Cleaning Agent								Vol. bottom phase (ml)
	VIGON® SC 200	VIGON® SC 202	VIGON® SC 210	VIGON® N 600	VIGON® N 640	VIGON® 1000 CR	VIGON® PE 180	ZESTRON® VD 200	
75	29 %	28 %	28 %	29,5 %	29 %		27 %		75
74	30 %	28,5 %	29 %	30,5 %	30,5 %		28 %		74
73	31 %	29,5 %	30 %	31,5 %	31,5 %		29 %		73

Evaluation example:

- Bottom, purple phase has a volume of 73 ml
- In case of VIGON® SC 202, the concentration of the cleaning bath is 29.5 %

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

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Correlation charts for concentration measurements

ZESTRON High Precision Cleaning

Vol. bottom phase (ml)	Cleaning Agent								Vol. bottom phase (ml)
	VIGON® SC 200	VIGON® SC 202	VIGON® SC 210	VIGON® N 600	VIGON® N 640	VIGON® 1000 CR	VIGON® N 680	ZESTRON® VD 200	
95-100	≤10%	≤10 %	≤9 %	≤9 %		≤10 %		≤10 %	**95-100**
94	10 %	10 %	9 %	10 %		10 %	≤8 %	10 %	**94**
93	11 %	11 %	10 %	11 %	≤10 %	11 %	9 %	11 %	**93**
92	12 %	12 %	11 %	12 %	10 %	12 %	10 %	12 %	**92**
91	13 %	13 %	12 %	13 %	11 %	13 %	11 %	13 %	**91**
90	14 %	14 %	13 %	14 %	12 %	14 %	12 %	14 %	**90**
89	15 %	15 %	14 %	15 %	13,5 %	15 %	13 %	15 %	**89**
88	16 %	16 %	15 %	16 %	14,5 %	16 %	14 %	16 %	**88**
87	17 %	17 %	16 %	17 %	15,5 %	17 %	15 %	17 %	**87**
86	18 %	18 %	17 %	18,5 %	17 %	18 %	16 %	18 %	**86**
85	19 %	19 %	18 %	19,5 %	18 %	19 %	17 %	19 %	**85**
84	20 %	20 %	19 %	20,5 %	19 %	20 %	18 %	20 %	**84**
83	21 %	21 %	20 %	21,5 %	20 %	21 %	19 %	21 %	**83**
82	22 %	22 %	21 %	22,5 %	21 %	22 %	20 %	22 %	**82**
81	23 %	23 %	22 %	23,5 %	22,5 %	23 %	21 %	23 %	**81**
80	24 %	24 %	23 %	24,5 %	23,5 %	24 %	22 %	24 %	**80**
79	25 %	25 %	24 %	25,5 %	24,5 %	25 %	23 %	25 %	**79**
78	26 %	25,5 %	25 %	26,5 %	26 %		24 %		**78**
77	27 %	26,5 %	26 %	27,5 %	27 %		25 %		**77**
76	28 %	27 %	27 %	28,5 %	28 %		26 %		**76**
75	29 %	28 %	28 %	29,5 %	29 %		27 %		**75**
74	30 %	28,5 %	29 %	30,5 %	30,5 %		28 %		**74**
73	31 %	29,5 %	30 %	31,5 %	31,5 %		29 %		**73**
72	32 %	30 %	31 %	33 %	32,5 %		30 %		**72**
71	33 %	31 %	32 %	34 %	33,5 %		31 %		**71**
70	34 %	32 %	33 %	35 %	35 %		32 %		**70**
69	35 %	33 %	34 %	36 %	36 %		33 %		**69**
68	36 %	33,5 %	35 %	37 %	37 %		34 %		**68**
67	37 %	34,5 %	36 %	38 %	38 %		35 %		**67**
66	38 %	35,5 %	37 %	39 %	39,5 %		36 %		**66**
65	39 %	36 %	38 %	40 %	40,5 %		37 %		**65**
64	40 %	37 %	39 %	41 %			38 %		**64**
63	41 %	38 %	40 %	42 %			39 %		**63**
62	42 %	38,5 %		43 %			40 %		**62**
61	43 %	39,5 %		44 %			41 %		**61**
60	44 %	40 %		45 %			42 %		**60**

Should you have any questions, please contact our Application Technology Department:
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Correlation charts for concentration measurements

ZESTRON High Precision Cleaning

Vol. bottom phase (ml)	Cleaning Agent							Vol. bottom phase (ml)
	VIGON® PE 180	VIGON® PE 200	VIGON® PE 215N	VIGON® TC 150	HYDRON® SE 230A	HYDRON® SC 300	ATRON® DC	
93-98	≤9 %	≤9 %			≤ 7,0 %	≤9 %		**93-98**
92	10 %	10 %	≤9 %		8,0 %	10 %	≤9 %	**92**
91	11 %	11 %	10 %	≤9 %	9,0 %	11 %	10 %	**91**
90	12 %	12 %	12 %	10 %	10,0 %	12 %	11 %	**90**
89	13 %	13 %	13 %	11 %	10,5 %	13 %	12 %	**89**
88	14 %	14 %	14 %	12 %	11,5 %	14 %	13 %	**88**
87	15 %	15 %	15 %	13 %	12,5 %	15 %	14 %	**87**
86	16 %	16 %	16 %	14 %	13,5 %	16 %	15 %	**86**
85	17 %	17 %	17 %	15 %	14,5 %	17 %	16 %	**85**
84	18 %	18 %	18 %	16 %	15,5 %	17,5 %	17 %	**84**
83	19 %	19 %	20 %	17 %	16,5 %	18,5 %	18 %	**83**
82	20 %	20 %	21 %	18 %	17,5 %	19,5 %	19 %	**82**
81	21 %	21 %	22 %	19 %	18,5 %	20,5 %	20 %	**81**
80	22 %	22 %	23 %	20 %	19,5 %	21,5 %	21,5 %	**80**
79	23 %	23 %	24 %	21 %	20,0 %	22,5 %	23 %	**79**
78	24 %	24 %	25 %	22 %	21,0 %	23,5 %	24 %	**78**
77	25 %	25 %	27 %	23 %	22,0 %	24,5 %	25 %	**77**
76	26 %	26 %	28 %	24 %	23,0 %	25,5 %	26 %	**76**
75	27 %	27 %	29 %	25 %	24,0 %	26 %	27 %	**75**
74	28 %	28 %	30 %	26 %	25,0 %	27 %	28 %	**74**
73	29 %	29 %	31 %	27 %	26,0 %	28 %	29 %	**73**
72	30 %	30 %	32 %	28 %	27,0 %	29 %	30 %	**72**
71	31 %	31 %	33 %	29 %	28,0 %	30 %	31,5 %	**71**
70	32 %	32 %	35 %	30 %	29,0 %	31 %	33 %	**70**
69	33 %	33 %	36 %	31 %	30,0 %	32 %	34 %	**69**
68	34 %	34 %	37 %	32 %		33 %	35 %	**68**
67	35 %	35 %	38 %	33 %		34 %	36 %	**67**
66	36 %	36 %	39 %	34 %		34,5 %	37 %	**66**
65	37 %	37 %	40 %	35 %		35,5%	38 %	**65**
64	38 %	38 %	42 %	36 %		36,5 %	39 %	**64**
63	39 %	39 %	43 %	37 %		37,5 %	40 %	**63**
62	40 %	40 %	44 %	38 %		38,5 %	41 %	**62**
61	41 %	41 %	45 %	39 %		39,5 %	42 %	**61**
60	42 %	42 %	46 %	40 %		40,5 %	43 %	**60**
59		43 %	47 %	41 %		41,5 %	44 %	**59**
58		44 %	48 %	42 %		42,5 %	45 %	**58**

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Correlation charts for concentration measurements

ZESTRON High Precision Cleaning

Vol. bottom phase (ml)	Cleaning Agent	
	HYDRON® SE 220	VIGON® PM 105
93-98		≤9,5 %
92		10,5 %
91		12 %
90		13 %
89		14 %
88		15 %
87		16,5 %
86		17,5 %
85		18,5 %
84		20 %
83	≤ 9,5 %	21 %
82	10 %	22 %
81	10,5 %	23 %
80	11 %	24,5 %
79	11,5 %	25,5 %
78	12 %	26,5 %
77	12,5 %	27,5 %
76	13 %	29 %
75	13,5 %	30 %
74	14 %	31 %
73	15 %	32 %
72	15,5 %	33,5 %
71	16 %	34,5 %
70	16,5 %	35,5 %
69	17 %	36,5 %
68	18 %	38 %
67	18,5 %	39 %
66	19 %	40 %
65	20 %	41 %
64	20,5 %	42,5 %
63	21 %	43,5 %
62	22 %	44,5 %
61	22,5 %	45,5 %
60	23 %	47 %
59	24 %	48 %
58	25 %	49 %

Vol. bottom phase (ml)	Cleaning Agent	
	HYDRON® SE 220	VIGON® PM 105
57	25,5 %	50,5 %
56	26 %	51,5 %
55	27 %	52,5 %
54	28 %	53,5 %
53	29 %	55 %
52	30 %	56 %
51	31 %	57 %
50	32 %	58 %
49	33 %	59,5 %
48	34 %	60,5 %
47	35 %	61,5 %
46	36 %	
45	37,5 %	
44	39 %	
43	40,5 %	
42	42,5 %	
41	44,5 %	

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