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www.bayerliquor.com
measure. research. innovate.

We are the original developer of BLAIR and are committed to its success. We are also committed to increasing the efficiency of your Bayer liquor analyses. Our aim is to help you get the best from your alumina refinery - quickly, conveniently and at a low cost. Our PhD qualified R&D group have decades of experience in providing expert technical backup, support and training that is second to none. Please consider BLAIR, and contact us for more information about the BLAIR system, or to discuss your specific requirements.



A new standard for Bayer liquor analysis



Sample Name	A	C	S	Na2SO4	TOC	
CCC_liquor7_3_20120913_M2p10	< 1	266.2	265.9	< 1	< 1	0.00
CCC_liquor7_2_20120913_M2p10	< 1	266.3	266.0	< 1	< 1	N/A
liquor7_1_20120913_M2p10	< 1	266.7	266.6	< 1	< 1	N/A
20120913_M2p10	101.1	321.4	341.8	< 1	< 1	68.50
M2p10	101.2	321.2	341.6	< 1	< 1	N/A
	100.6	320.8	320.0	< 1	< 1	0.46
	81.3	300.7	321.2	< 1	2.6	0.99
		301.6	321.0	< 1	2.5	1.11
		301.3	100.3	< 1	2.7	1.01
		98.9		< 1	10.3	0.95
				< 1	10.3	0.96
				< 1	10.2	0.97



Fast, comprehensive and reliable analysis

BLAIR is Bayer Liquor Analysis by Infra-Red. It's a powerful technology for analysing Bayer liquors which conveniently provides over twelve Bayer liquor parameters. BLAIR requires no messy titrations, no dilutions and no additional reagents. The older classical methods of analysis are time consuming and provide unreliable results if not constantly maintained. BLAIR gives repeatable and reliable results, whether you are measuring an occasional sample or analysing continuously.

The all-in-one system

BLAIR provides a wealth of chemical information that previously would have required several instruments. It provides this information at a lower cost and in far less time than current methods of Bayer liquor analysis.

A single BLAIR measurement provides:

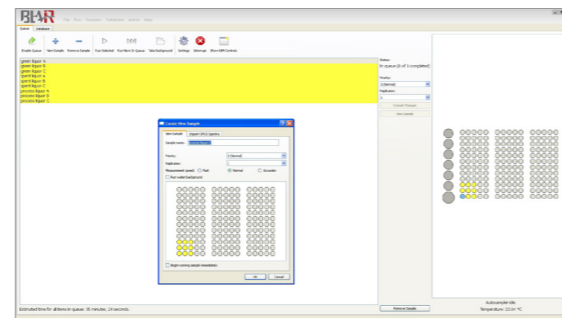
- alumina
- total alkalinity
- oxalate
- formate
- malonate
- sulfate
- total caustic
- TOC
- acetate
- succinate
- chloride
- density

Analysis of Bayer organics made easy

In less than five minutes BLAIR measures TOC, oxalate, acetate, formate, succinate and malonate. A relative measure of the oxidation and breakdown of organics between liquors can also be quickly assessed through the Borg value (a parameter unique to BLAIR).

Advantages of BLAIR

- Over twelve Bayer liquor parameters in less than five minutes
- Small sample volumes and no additional reagents needed
- Direct measurements over the whole Bayer liquor range
- Low capital cost and robust system
- No prior sample knowledge or dilution required
- Less on-going maintenance
- Applicable for at-line monitoring



BLAIR Specifications

Measurement parameters	A, C, S, TOC, oxalate, acetate, formate, succinate, malonate, sulfate, chloride, density and the Borg value			
Minimum sample volume	50 µL (manual system), 4.5 mL (automated system, 180 sample capacity)			
Measurement time	less than 5 minutes			
Accuracy[#]	A	1.2 g/L	TOC	0.5 g/L
	C	2.6 g/L	oxalate	0.2 g/L
	S	2.2 g/L	acetate	0.7 g/L
	sulfate	0.5 g/L	formate	0.3 g/L
	chloride	1.5 g/L	succinate	0.7 g/L
	density	0.004 g/mL	malonate	0.6 g/L
	Precision[^]	A	0.5 g/L	TOC
C		1.0 g/L	oxalate	0.1 g/L
S		1.0 g/L	acetate	0.3 g/L
sulfate		0.3 g/L	formate	0.2 g/L
chloride		1.7 g/L	succinate	0.4 g/L
density		0.002 g/mL	malonate	0.2 g/L
Dimensions		main unit	autosampler	
	30 x 40 x 25 cm (w x d x h)	28.5 x 49 x 51 cm (w x d x h)		
Weight	7 kg	13.5 kg		
Power Supply	100 – 240 VAC, 50 - 60 Hz			

[#] Root mean square error (RMSE) for a validation set of twenty-eight process and synthetic Bayer liquors

[^] Standard deviations for a set of forty-one replicate measurements taken over several days for the same synthetic Bayer liquor.