

# Analytical report for Faux-Bourdon brewery

Standard parameters measurement

06/01/24

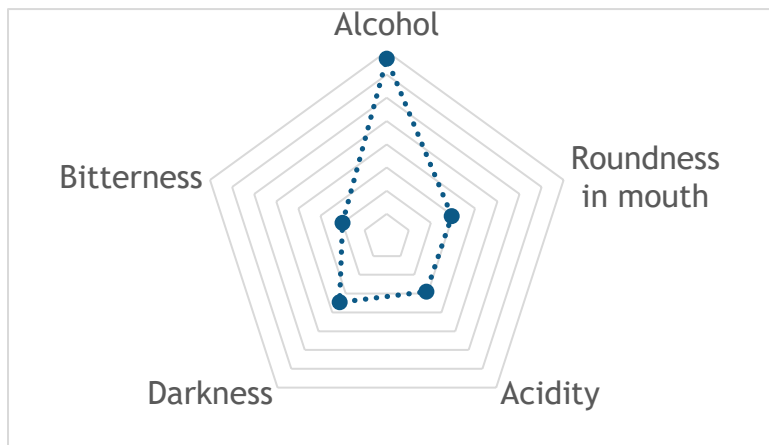
Samples :

1. Operculette Lot OP7

## ANALYSIS PERFORMED

Samples were analysed twice for measuring alcohol, density, EBC color, pH and IBU bitterness. Alcohol and density were established by using an Alex 500 from Anton-Paar, following the measurement protocol advised by the manufacturer. EBC color, pH and IBU bitterness were established by using Mebak protocols. Residual sugars as well as organic acids were measured by ionic chromatography. Finally, higher alcohol and esters were assessed by Headspace GS-MS, as suggested by MEBAK protocols. These parameters allow to draw the “identity card” of the beer.

	Alcohol (%V/V)	Density (g/cm <sup>3</sup> )	Alcohol (%W/W)	Ap. extract (%W/W)	Re. extract (%W/W)	Or. extract (%W/W)	ADF (%)	RDF (%)	Calories (kJ/dl)	pH	EBC color	IBU bitter	Comment
Operculette	9.38	1.0155	7.29	4.41	7.58	21.01	79.01	66.53	330.15	4.42	65	24	

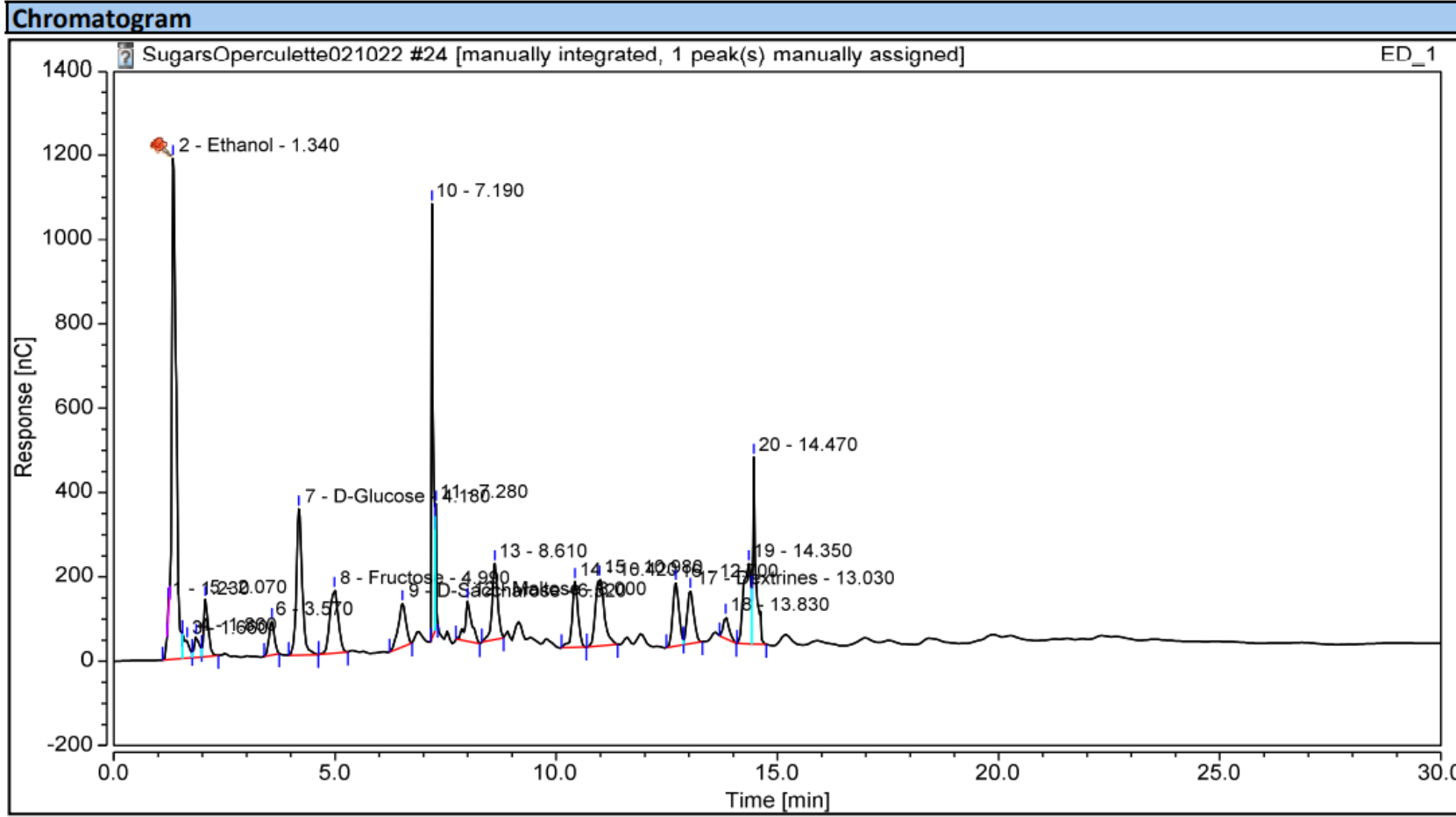


Le Pâquier, the 06<sup>th</sup> of January 2024

Dr Matthieu Bueche



Residual suger profile



**Fermentable sugars :**

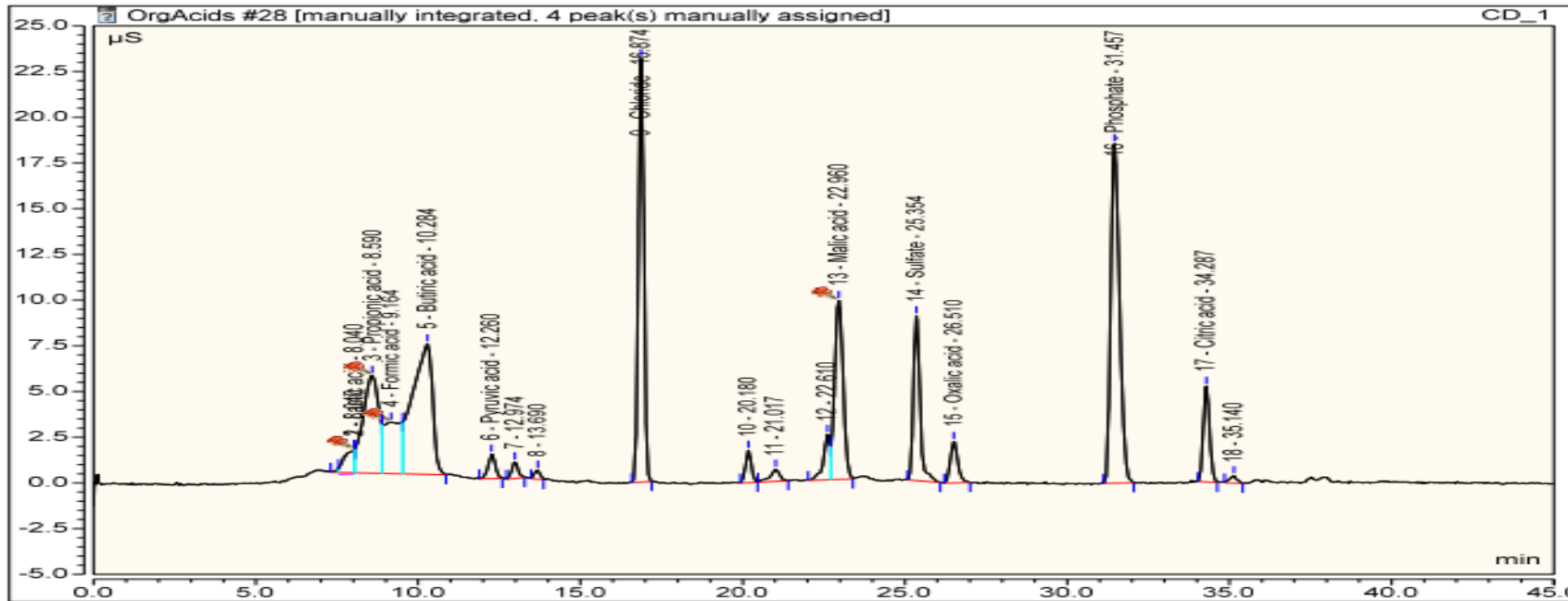
D-glucose: 0.67g/l

Fructose: 0.60g/l

D-Saccharose: 0.33g/l

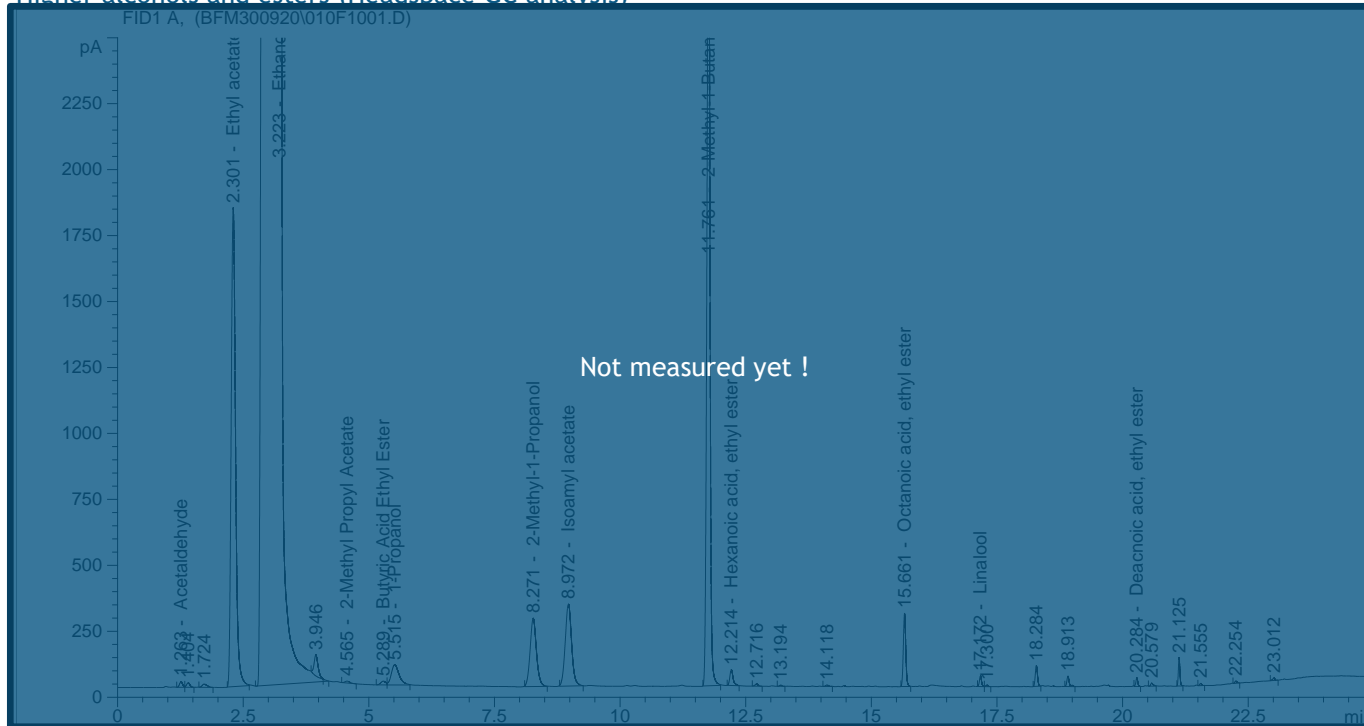
Maltose: 0.54g/l

Organic acids profile



No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount (g/l)
1	8.04	Lactic acid	Ru^A	0.481	1.327	0.3550
3	8.59	Propionic acid	M^A	3.036	5.357	3.1568
4	9.16	Formic acid	M^A	1.776	2.826	0.3491
5	10.28	Butiric acid	MB*	5.097	7.141	5.5678
6	12.26	Pyruvic acid	BMB	0.344	1.347	0.0909
9	16.87	Chloride	BMB	4.530	23.167	n.a.
13	22.96	Malic acid	MB^A	2.960	9.792	1.5214
14	25.35	Sulfate	BMB	2.115	9.022	n.a.
15	26.51	Oxalic acid	BMB	0.600	2.270	0.0553
16	31.46	Phosphate	BMB	5.794	18.571	n.a.
17	34.29	Citric acid	BMB	1.185	5.226	0.7451
<b>TOTAL:</b>				<b>27.92</b>	<b>86.05</b>	<b>11.84</b>

Higher alcohols and esters (Headspace GC analysis)



Pk	Compound name	Amount (ng/μl)	Flavor, description
1	Acetaldehyde	NA	Green apple flavor. Acetaldehyde is present in all beers.
2	Ethylacetate	NA	Nail varnish or solvent like flavor. Ethyl Acetate is present in all beers as it a natural part of the fermentation process by yeast
3	Ethanol		
4	2-Methyl Propyl Acetate	NA	
5	Butyric Acid Ethyl Ester	NA	
6	1-Propanol	NA	Rough flavors, harshness of beer
7	2-Methyl-1-propanol	NA	Rough flavors, harshness of beer
8	Isoamyl-acetate	NA	Common ester flavor which is present in all beers. It is perceived as a banana, pear drop or fruit like flavor
9	2-Methyl-1-butanol	NA	Fruity flavor



*Tasting notes*  
To be defined !