



**MICROBIOLOGICAL
SAFETY IN THE
BEVERAGE INDUSTRY**

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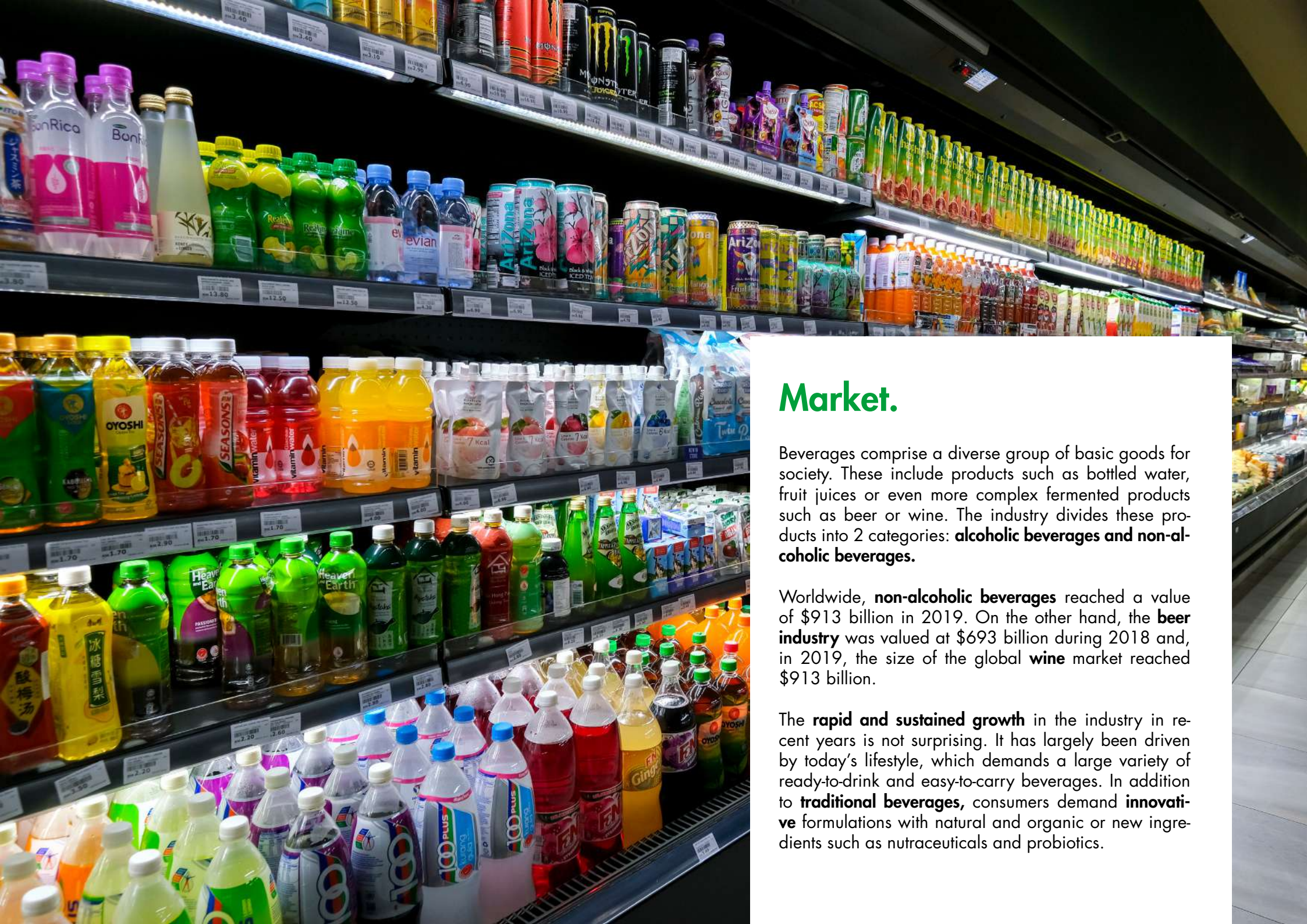
Condalab

Inspired by knowledge

Condalab, the first Spanish manufacturer since 1960

Over 60 years of experience in the manufacture of **culture media and reagents for microbiology** have made us a benchmark brand. Throughout this time, we have developed high-quality raw materials to offer: peptones, extracts or agars. These products are the key components for the formulation of **high-quality** culture media of **excellent yield**.

We offer a wide product portfolio for the **microbiological analysis of beverages**, both in end product and process control, helping our clients to obtain standardized processes free of any microbial contamination.



Market.

Beverages comprise a diverse group of basic goods for society. These include products such as bottled water, fruit juices or even more complex fermented products such as beer or wine. The industry divides these products into 2 categories: **alcoholic beverages** and **non-alcoholic beverages**.

Worldwide, **non-alcoholic beverages** reached a value of \$913 billion in 2019. On the other hand, the **beer industry** was valued at \$693 billion during 2018 and, in 2019, the size of the global **wine** market reached \$913 billion.


The **rapid and sustained growth** in the industry in recent years is not surprising. It has largely been driven by today's lifestyle, which demands a large variety of ready-to-drink and easy-to-carry beverages. In addition to **traditional beverages**, consumers demand **innovative** formulations with natural and organic or new ingredients such as nutraceuticals and probiotics.

Critical Points in the Beverage Production: Microbiological Analysis


Both alcoholic and non-alcoholic beverages are routinely **tested for indicator and spoilage microorganisms**, but not always for pathogens. Although three decades ago there were severe intoxication outbreaks linked to *Salmonella* in unpasteurized beverages, there are now controls and measures that minimize the presence of pathogenic organisms, such as **Good Farming Practices, Good Hygiene Practices, heat treatments** and the use of **preservatives**.

Even if **beverage spoilage** problems do not pose a serious risk to consumers, they are costly to producers. Product destruction and recall not only have direct economic consequences for the different companies, but can also affect the brand image and consumer trust.

Therefore, **monitoring and detecting microbial contamination** in beverages is essential to ensure safe consumption for consumers, but also to avoid economic losses for producers or damage to their image.



Indicator
microorganisms
analysis



Water
analysis



Pathogen
analysis



Environmental
monitoring



Spoilage
microorganisms
analysis

**Condalab solutions to ensure
the safety of your beverages**





Nonalcoholic Beverages and Juices

This category of beverages may include products such as carbonated and non-carbonated beverages, fruit and vegetable juices, and tea-based beverages.

Depending on their nature, these beverages may be subjected to **carbonation**, **pasteurization** or **acidity** processes and may contain **preservatives** in their formulation.

In general, pathogen analysis is not recommended for these types of beverages, however, there are some exceptions due to **ingredients** that may be **sources of contaminants** such as fruit and vegetable juices and concentrates, dairy and vegetable protein sources, and sugars and syrups.

Specifically for juices, the International Fruit and Vegetable Juice Association (**IFU**) comprising all the players involved in this industry, is in charge of publishing and updating the **methods of analysis**, which are a worldwide reference.

Spoilage

Changes in the product's organoleptic characteristics resulting from the presence of these microorganisms.

Alicyclobacillus spp.

Brettanomyces spp. and
Zygosaccharomyces bailli

Gluconobacter
and *Acetobacter*

Indicators

Their presence warns about production conditions and environment, and works as a tool for GHP and GFP control.

E. Coli - Coliforms

Total Yeast
and Molds

Total Aerobic
Bacteria

Pathogens

The presence of these microorganisms in products can be harmful to consumers health.

E. Coli O157:H7

Bacillus spp. and
Clostridium botulinum

Cryptosporidium
parvum

Alicyclobacillus spp.

CAT.	PRODUCT	SAMPLES	PACK SIZE
2002	Alicyclobacillus Detection Agar	Citrus Juice	500 g
2053	BAT Broth	Citrus Juice	500 g
4073	M-YSG Broth	Citrus Juice	20 Tubes
4104	M-YSG Broth	Citrus Juice	50 Tubes
2100	YSG Broth	Citrus Juice	500 g
4693	YSG Medium	Citrus Juice	10 x 200 ml
4113	YSG Medium	Citrus Juice	20 Tubes

Bacillus spp.

CAT.	PRODUCT	SAMPLES	PACK SIZE
1343	Bacillus Cereus Selective Agar Base (MYP)	Syrups and sugars	500 g

Fungi

CAT.	PRODUCT	SAMPLES	PACK SIZE
5153	Buffered Peptone Water	Raw materials and environmental	10 x 100 ml
1161	Dichloran Glycerol Agar (DG 18)	Raw materials and environmental	500 g
5020	Buffered Peptone Water	Raw materials and environmental	10 x 225 ml
5171	Buffered Peptone Water	Raw materials and environmental	10 x 90 ml
6702	Buffered Peptone Water	Raw materials and environmental	2 x 5 L
4250	Buffered Peptone Water	Raw materials and environmental	20 Tubes
6705	Buffered Peptone Water	Raw materials and environmental	3 x 3 L
6707	Buffered Peptone Water	Raw materials and environmental	5 x 2 L
1402	Buffered Peptone Water	Raw materials and environmental	500 g
2222	Cooked Meat Medium	Raw materials and environmental	500 g
1015	Czapek-Dox Modified Agar	Raw materials and environmental	500 g

Lactobacillus spp.

CAT.	PRODUCT	SAMPLES	PACK SIZE
4691	MRS Agar	Wort, fermentation, bottling	10 x 200 ml
4109	MRS Agar	Wort, fermentation, bottling	20 Tubes
4684	MRS Agar Low pH	Wort, fermentation, bottling	10 x 200 ml
1433	MRS Agar Low pH	Wort, fermentation, bottling	500 g
1288	MRS Broth w/o Dextrose and w/o Beef Extract	Wort, fermentation, bottling	500 g
1096	Rogosa SL Agar	Wort, fermentation, bottling	500 g

Lactobacillus, *Leuconostocs* and Lactic Acid Streptococci

CAT.	PRODUCT	SAMPLES	PACK SIZE
2049	APT Agar (All Purpose Tween)	Wort, fermentation, bottling	500 g

Aseptic Filling (Yeast & Molds)

CAT.	PRODUCT	SAMPLES	PACK SIZE
4697	Linden Grain Broth	Sterility in aseptic filling lines	10 x 450 ml
2068	Linden Grain Medium	Sterility in aseptic filling lines	500 g

General Spoilage Microorganisms

CAT.	PRODUCT	SAMPLES	PACK SIZE
5113	Orange Serum Agar	Raw materials and environmental	10 x 200 ml
4072	Orange Serum Agar	Raw materials and environmental	20 Tubes
1307	Orange Serum Agar	Raw materials and environmental	500 g
5193	Orange Serum Modified Agar	Raw materials and environmental	10 x 100 ml
5194	Orange Serum Modified Agar	Raw materials and environmental	10 x 200 ml
5181	Orange Serum Modified Agar	Raw materials and environmental	10 x 450 ml
1194	Yeast Mold Agar	Raw materials and environmental	500 g

Yeast & Molds

CAT.	PRODUCT	SAMPLES	PACK SIZE
827	Malt Extract Agar	Syrups, sugars, hops	20 Plates
1038	Malt Extract Agar	Syrups, sugars, hops	500 g
4692	Malt Extract Agar Acidified (pH 3,5)	Syrups, sugars, hops	10 x 200 ml
821	Malt Extract Agar Acidified (pH 4,3)	Syrups, sugars, hops	20 Plates
4071	Malt Extract Agar Acidified (pH 4,3)	Syrups, sugars, hops	20 Tubes
4550	Malt Extract Agar Acidified (pH 4,3)	Syrups, sugars, hops	30 Water Plates
4674	Malt Extract Agar with Chloramphenicol	Syrups, sugars, hops	10 x 200 ml
831	Malt Extract Agar with Chloramphenicol	Syrups, sugars, hops	20 Plates
1245	Malt Extract Broth	Syrups, sugars, hops	500 g
4694	Malt Extract Broth Acidified (pH 4,3)	Syrups, sugars, hops	10 x 450 ml
4103	Malt Extract Broth Acidified (pH 4,3)	Syrups, sugars, hops	50 Tubes
1527	OGA Medium (Oxytetracycline Glucose Agar Base) (OGYE)	Syrups, sugars, hops	500 g
4664	OGYE Agar	Syrups, sugars, hops	10 x 100 ml
4665	OGYE Agar	Syrups, sugars, hops	10 x 200 ml
851	OGYE Agar	Syrups, sugars, hops	20 Plates

Pseudomonas aeruginosa

CAT.	PRODUCT	SAMPLES	PACK SIZE
5122	Cetrimide Agar	Bottling	10 x 100 ml
916	Cetrimide Agar	Bottling	20 Plates
4704	Cetrimide Agar	Bottling	30 Water Plates
1102	Cetrimide Agar Base	Bottling	500 g

Total Count

CAT.	PRODUCT	SAMPLES	PACK SIZE
5115	Standard Methods Agar (PCA)	Bottling	10 x 100 ml
5112	Standard Methods Agar (PCA)	Bottling	10 x 200 ml
903	Standard Methods Agar (PCA)	Bottling	20 Plates
4105	Standard Methods Agar (PCA)	Bottling	20 Tubes
4706	Standard Methods Agar (PCA)	Bottling	30 Water Plates
1056	Standard Methods Agar (PCA)	Bottling	500 g



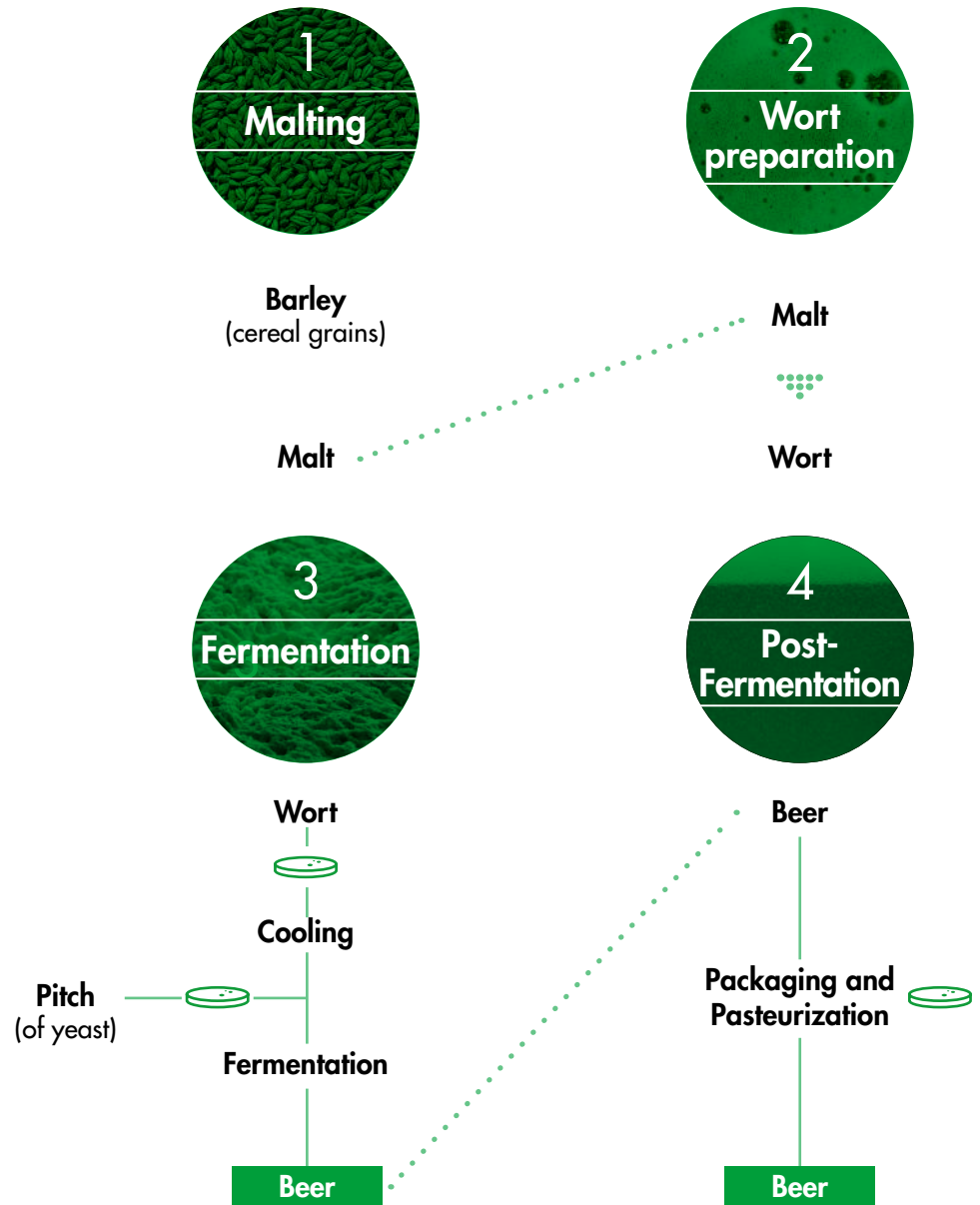
Beer

The inherent stability of beer is due in part to its ethanol content, in addition to antimicrobial compounds found naturally in hops, a low pH and filtration or temperature processes. However, this beverage is vulnerable to certain **spoilage microorganisms** which have been observed since 150 years ago thanks to Pasteur.

One of the indispensable pillars in the industry is the microbiological control in different points of the process, since a **possible contamination** can occur at **any stage** of the brewing process, from raw materials, especially water and grains, wort preparation and fermentation, to packaging and final distribution of the product.

The main reasons for these issues in beer are lactic acid bacteria (LAB) such as *Lactobacillus* and *Pediococcus*, gram-negative bacteria of the *Acetobacter* genus, wild yeasts, in particular, *Zygosaccharomyces* and *Saccharomyces*, and fungi such as *Fusarium*.

Brewing production process and critical points of contamination



Bacillus spp.

CAT.	PRODUCT	SAMPLES	PACK SIZE
945	Bacillus Cereus Selective Agar (MYP)	Syrups and sugars	20 Plates
1343	Bacillus Cereus Selective Agar Base (MYP)	Syrups and sugars	500 g

Acetic Acid Resistant Microorganisms

CAT.	PRODUCT	SAMPLES	PACK SIZE
5122	Cetrimide Agar	Bottling	10 x 100 ml
916	Cetrimide Agar	Bottling	20 Plates
4704	Cetrimide Agar	Bottling	30 Water Plates
1102	Cetrimide Agar Base	Bottling	500 g

Brettanomyces / *Dekkera* spp.

CAT.	PRODUCT	SAMPLES	PACK SIZE
4739	Brettanomyces Agar	Wort, fermentation, bottling	30 Water Plates
2006	Brettanomyces Agar	Wort, fermentation, bottling	500 g
2005	Brettanomyces Selective Broth	Wort, fermentation, bottling	500 g
5078	SGQ+ Broth	Wort, fermentation, bottling	10 x 450 ml
4075	SGQ+ Broth	Wort, fermentation, bottling	20 Tubes

Fungi

CAT.	PRODUCT	SAMPLES	PACK SIZE
1015	Czapek-Dox Modified Agar	Grain	500 g
832	DG 18 Metal Agar	Grain	20 Plates
1161	Dichloran Glycerol Agar (DG 18)	Grain	500 g
849	Potato Dextrose Agar	Grain	20 Plates
1022	Potato Dextrose Agar	Grain	500 g
1261	Potato Dextrose Broth	Grain	500 g

General Spoilage Microorganisms

CAT.	PRODUCT	SAMPLES	PACK SIZE
902	Nutrient Agar	Raw materials and brewery environments	20 Plates
1060	Nutrient Agar	Raw materials and brewery environments	500 g
1216	Nutrient Broth	Raw materials and brewery environments	500 g
1251	Nutrient Broth N°2	Raw materials and brewery environments	500 g
5113	Orange Serum Agar	Raw materials and brewery environments	10 x 200 ml
1307	Orange Serum Agar	Raw materials and brewery environments	500 g
1562	Universal Beer Agar (UBA)	Raw materials and brewery environments	500 g
1026	WL Differential Agar	Raw materials and brewery environments	500 g
1086	WL Nutrient Agar	Raw materials and brewery environments	500 g
1572	WL Nutrient Broth	Raw materials and brewery environments	500 g

Lactic Acid Bacteria

CAT.	PRODUCT	SAMPLES	PACK SIZE
1438	Modified Nocive Brewers Bacteria Agar Base	Yeast, fermentation, bottling	500 g
1440	Nocive Brewers Bacteria Broth Base Modified	Yeast, fermentation, bottling	500 g
1061	Raka-Ray Agar Base	Yeast, fermentation, bottling	500 g

Lactobacillus spp.

CAT.	PRODUCT	SAMPLES	PACK SIZE
4691	MRS Agar	Wort, fermentation, bottling	10 x 200 ml
943	MRS Agar	Wort, fermentation, bottling	20 Plates
4109	MRS Agar	Wort, fermentation, bottling	20 Tubes
1043	MRS Agar	Wort, fermentation, bottling	500 g
4684	MRS Agar Low pH	Wort, fermentation, bottling	10 x 200 ml
1433	MRS Agar Low pH	Wort, fermentation, bottling	500 g
1096	Rogosa SL Agar	Wort, fermentation, bottling	500 g

Lactobacillus, Leuconostocs and Lactic Acid Streptococci

CAT.	PRODUCT	SAMPLES	PACK SIZE
2049	APT Agar (All Purpose Tween)	Wort, fermentation, bottling	500 g

Yeast & Molds

CAT.	PRODUCT	SAMPLES	PACK SIZE
1164	Corn Meal Agar	Grains and hops	500 g
832	DG 18 Metal Agar	Grain	20 Plates
1161	Dichloran Glycerol Agar (DG 18)	Grain	500 g
827	Malt Extract Agar	Syrups, sugars, hops	20 Plates
1038	Malt Extract Agar	Syrups, sugars, hops	500 g
4674	Malt Extract Agar with Chloramphenicol	Syrups, sugars, hops	10 x 200 ml
831	Malt Extract Agar with Chloramphenicol	Syrups, sugars, hops	20 Plates
1245	Malt Extract Broth	Syrups, sugars, hops	500 g
950	Rose Bengal Agar with Chloramphenicol	Grain, hops	20 Plates
4529	Rose Bengal Agar with Chloramphenicol	Grain, hops	30 Water Plates
1081	Rose Bengal Agar with Chloramphenicol	Grain, hops	500 g
1316	Wort Agar	Wort, fermentation, bottling	500 g
1444	Wort Broth	Wort, fermentation, bottling	500 g
2008	Yeast Mold Broth	Wort, fermentation, bottling	500 g
1553	Yeast Nitrogen Base w/o Added Aminoacids and w/o Ammonium Sulfate	Wort, fermentation, bottling	500 g
1545	Yeast Nitrogen Base w/o Amino Acids	Wort, fermentation, bottling	500 g



Wine

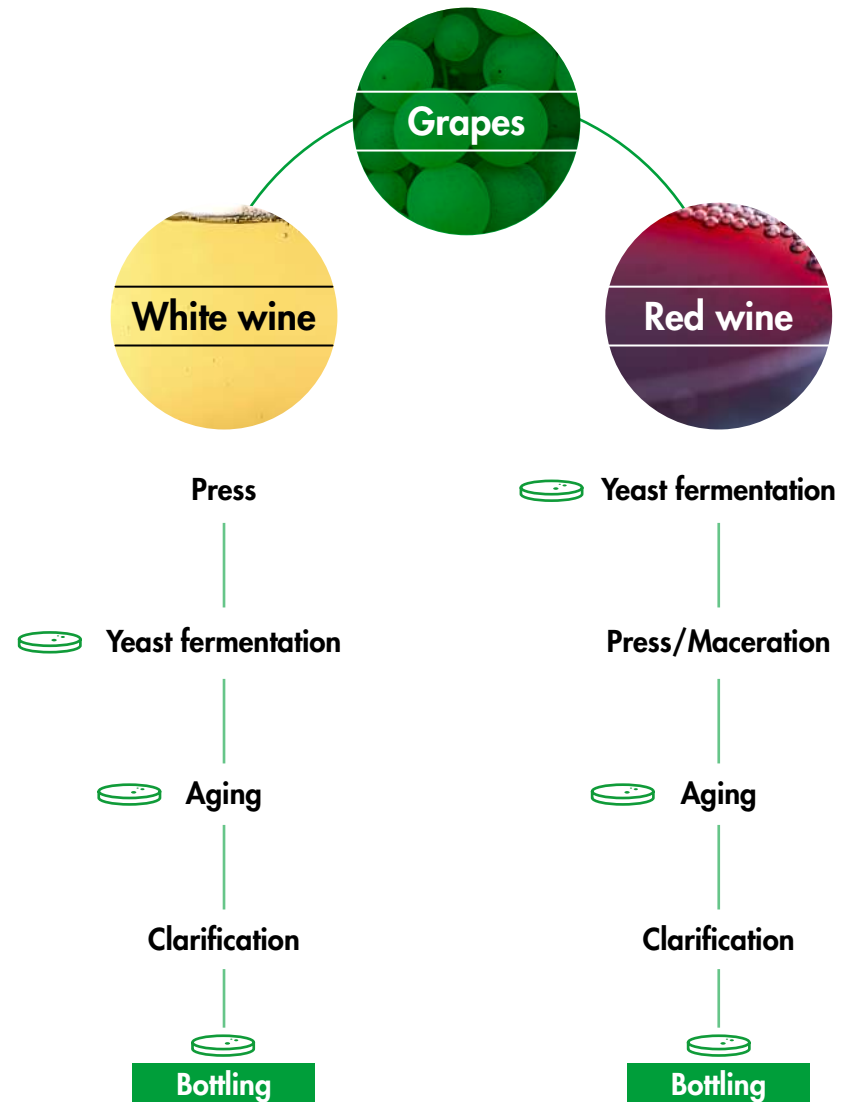
Wine is not only one of the first fermented products, but the first to be commercialized, produced on a large scale and studied. And as in beer, Pasteur demonstrated, not only the **existence of microorganisms** in wine, but also their role in both the production and **spoilage** of wine.

As in other beverages, the main microbiological control in wine is carried out for the analysis of spoilage microorganisms, the main responsible ones being wild yeast strains such as *Brettanomyces/Dekkera*, acetobacter and LAB such as *Acetobacter* and *Lactobacillus*.

The critical points where there is a risk of microbiological contamination are mainly found in the **quality** of the raw material, the presence of **wild yeast strains** during yeast fermentation and the **barrels** where wine ages.

To this end, the International Organisation of Vine and Wine (**OIV**) has created a compendium of international methods of analysis, which includes the **microbiological control** of wine and wort.

Winemaking process and critical points of contamination



 Critical points

Acetic Acid Resistant Microorganisms

CAT.	PRODUCT	SAMPLES	PACK SIZE
5122	Cetrimide Agar	Bottling	10 x 100 ml
916	Cetrimide Agar	Bottling	20 Plates
4704	Cetrimide Agar	Bottling	30 Water Plates
1102	Cetrimide Agar Base	Bottling	500 g

Brettanomyces / Dekkera spp.

CAT.	PRODUCT	SAMPLES	PACK SIZE
4739	Brettanomyces Agar	Wort, fermentation, bottling	30 Water Plates
2005	Brettanomyces Selective Broth	Wort, fermentation, bottling	500 g
5078	SGQ+ Broth	Wort, fermentation, bottling	10 x 450 ml
4075	SGQ+ Broth	Wort, fermentation, bottling	20 Tubes

General Spoilage Microorganisms

CAT.	PRODUCT	SAMPLES	PACK SIZE
1026	WL Differential Agar	Raw materials and environmental	500 g
1086	WL Nutrient Agar	Raw materials and environmental	500 g
1572	WL Nutrient Broth	Raw materials and environmental	500 g

Lactobacillus spp.

CAT.	PRODUCT	SAMPLES	PACK SIZE
4691	MRS Agar	Wort, fermentation, bottling	10 x 200 ml
943	MRS Agar	Wort, fermentation, bottling	20 Plates
4109	MRS Agar	Wort, fermentation, bottling	20 Tubes
1043	MRS Agar	Wort, fermentation, bottling	500 g
4684	MRS Agar Low pH	Wort, fermentation, bottling	10 x 200 ml
1433	MRS Agar Low pH	Wort, fermentation, bottling	500 g
1096	Rogosa SL Agar	Wort, fermentation, bottling	500 g

Yeast & Molds

CAT.	PRODUCT	SAMPLES	PACK SIZE
827	Malt Extract Agar	Syrups, sugars, hops	20 Plates
1038	Malt Extract Agar	Syrups, sugars, hops	500 g
4674	Malt Extract Agar with Chloramphenicol	Syrups, sugars, hops	10 x 200 ml
831	Malt Extract Agar with Chloramphenicol	Syrups, sugars, hops	20 Plates
1245	Malt Extract Broth	Syrups, sugars, hops	500 g
1316	Wort Agar	Wort, fermentation, bottling	500 g
1444	Wort Broth	Wort, fermentation, bottling	500 g
2008	Yeast Mold Broth	Wort, fermentation, bottling	500 g
1553	Yeast Nitrogen Base w/o Added Aminoacids and w/o Ammonium Sulfate	Wort, fermentation, bottling	500 g
1545	Yeast Nitrogen Base w/o Amino Acids	Wort, fermentation, bottling	500 g



Drinking Water Control

The beverage industry consists of a wide variety of products with ingredients from a variety of animal, vegetable and synthetic sources. However, the main common ingredient and raw material is **water**. To ensure its quality, it is necessary to analyze its **physicochemical and microbiological properties**. Water is an essential part of human wellbeing and is recognized as one of the main vectors of diseases.

The **Directive (EU) 2020/2184** states the minimum parameters for drinking water, and emphasizes on some bacteria that indicate **fecal contamination**, in particular *E. coli*. This directive also establishes controls for Enterococci and culturable organisms.

In case of **issues related to quality**, additional testing for *Salmonella* or parasites such as *Entamoeba histolytica*, *Giardia intestinalis* or *Cryptosporidium parvum* is usually performed.

Indicators

Their presence warns about the production conditions and environment, and acts as a tool for GHP and GMP control.



Microbiological parameters, indicators and operational parameters	Parameter value (CFU/100 ml or 250 ml ¹)	Methods of analysis
<i>Escherichia coli</i>	0	ISO 9308-1 ISO 9308-2
Enterococci	0	ISO 7899-2
² <i>Clostridium perfringens</i> (including spores)	0	ISO 14189
Colony count at 22°C	No abnormal changes	ISO 6222
Coliform bacteria	0	ISO 9308-1 ISO 9308-2
³ Somatic Coliphages	50	ISO 10705-2 ISO 10705-3

¹ For bottled water.

² If the risk assessment indicates it is appropriate to do so.

³ Untreated water.

Clostridium perfringens

CAT.	PRODUCT	NORMATIVE	PACK SIZE
4709	Clostridium Perfringens Agar (m-CP)	Council Directive 98/83/EC	30 Water Plates
1132	Clostridium Perfringens Agar Base (m-CP)	ISO 7937, ISO 14189	500 g
4660	TSC Agar Base (Tryptose Sulfite Cycloserine)	Council Directive 98/83/EC	10 x 100 ml
4661	TSC Agar Base (Tryptose Sulfite Cycloserine)	ISO 7937, ISO 14189	10 x 200 ml
4728	TSC Agar Base (Tryptose Sulfite Cycloserine)	ISO 7937, ISO 14189	30 Water Plates

E. coli / Coliforms

CAT.	PRODUCT	NORMATIVE	PACK SIZE
4702	Chapman TTC Agar (Tergitol 7 Agar)		30 Water Plates
1076	Chapman TTC Agar (Tergitol 7 Agar)		500 g
981	Chromogenic Coliforms Agar (CCA)	ISO 9308	20 Plates
4721	Chromogenic Coliforms Agar (CCA)	ISO 9308	30 Water Plates
2080	Chromogenic Coliforms Agar (CCA)	ISO 9308	500 g
4722	Fecal Coliforms Agar (m-FC)		30 Water Plates
1127	Fecal Coliforms Agar Base (m-FC)		500 g
2182	m-Agar Lactose Glucuronide (mLGA)		500 g
4102	M-CC Broth		50 Tubes

Enterobacteriaceae

CAT.	PRODUCT	NORMATIVE	PACK SIZE
5003	MacConkey Agar	European Pharmacopeia, USP, ISO 21150, ISO 21567	10 x 100 ml
900	MacConkey Agar	European Pharmacopeia, USP, ISO 21150, ISO 21567	20 Plates
1052	MacConkey Agar	European Pharmacopeia, USP, ISO 21150, ISO 21567	500 g
1035	MacConkey Agar N° 2		500 g

Enterococcus (intestinal)

CAT.	PRODUCT	NORMATIVE	PACK SIZE
952	Bile Esculin Azide Agar	ISO 7899-2	20 Plates
1372	Bile Esculin Azide Agar	ISO 7899-2	500 g
1070	Enterococcus Selective Agar (Enterococcosel Agar)		500 g
1034	KF Streptococcal Agar		500 g
946	Slanetz-Bartley Medium	ISO 7899-2	20 Plates
4710	Slanetz-Bartley Medium	ISO 7899-2	30 Water Plates
1109	Slanetz-Bartley Medium	ISO 7899-2	500 g

Pseudomonas aeruginosa

CAT.	PRODUCT	NORMATIVE	PACK SIZE
1011	Bismuth Sulfite Agar (Wilson Blair)	USP	500 g
5122	Cetrimide Agar	European Pharmacopeia, USP, ISO 22717	10 x 100 ml
916	Cetrimide Agar	European Pharmacopeia, USP, ISO 22717	20 Plates
4704	Cetrimide Agar	European Pharmacopeia, USP, ISO 22717	30 Water Plates
1102	Cetrimide Agar Base	ISO 16266	500 g
4740	Pseudomonas Agar CN	European Pharmacopeia, USP, ISO 22717	30 Water Plates
1153	Pseudomonas CN Agar Base	ISO 16266	500 g

Total Mesophilic Bacteria

CAT.	PRODUCT	NORMATIVE	PACK SIZE
1190	TGEA Medium (Tryptone Glucose Yeast Extract Agar)	ISO 6222	500 g
4671	Yeast Extract Agar (YEA)	ISO 6222	10 x 100 ml
4672	Yeast Extract Agar (YEA)	ISO 6222	10 x 200 ml
4022	Yeast Extract Agar (YEA)	ISO 6222	20 Tubes
4703	Yeast Extract Agar (YEA)	ISO 6222	30 Water Plates
1049	Yeast Extract Agar (YEA)		500 g

Yeast & Molds

CAT.	PRODUCT	NORMATIVE	PACK SIZE
5107	Dextrose Sabouraud Agar	European Pharmacopeia, USP, ISO 16212	10 x 100 ml
5143	Dextrose Sabouraud Agar	European Pharmacopeia, USP, ISO 16212	10 x 200 ml
907	Dextrose Sabouraud Agar	European Pharmacopeia, USP, ISO 16212	20 Plates
4214	Dextrose Sabouraud Agar	European Pharmacopeia, USP, ISO 16212	20 Tubes
4714	Dextrose Sabouraud Agar	European Pharmacopeia, USP, ISO 16212	30 Water Plates
1024	Dextrose Sabouraud Agar	European Pharmacopeia, USP, ISO 16212	500 g
4692	Malt Extract Agar Acidified (pH 3,5)		10 x 200 ml
821	Malt Extract Agar Acidified (pH 4,3)		20 Plates
4071	Malt Extract Agar Acidified (pH 4,3)		20 Tubes
4550	Malt Extract Agar Acidified (pH 4,3)		30 Water Plates
4694	Malt Extract Broth Acidified (pH 4,3)		10 x 450 ml
4103	Malt Extract Broth Acidified (pH 4,3)		50 Tubes
988	M-Green Yeast and Mold Agar		20 Plates
2108	M-Green Yeast and Mold Agar		500 g
1166	Sabouraud Dextrose Agar 2%		500 g



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**If you need further information on products and techniques
for the beverage industry, please do not hesitate to contact us.**