



Universidad de Jaén



Discover the world of Microbiological food

Virginia Ortega Garrido, Alejandra Carmona Amaro, Laura Moreno Navío, Joaquín García Bocanegra, Adrián Ortega Salas, Antonio Jesús Cozar González, Lucía Palomino Espinosa, Javier Arjona Soriano, María Isabel Orta, Israel Sánchez Romero.

Colegio/IES Las fuentezuelas, Avda. de Arjona 5, 23006, Jaén, Spain

Departamento de Biología, Universidad de Jaén, Campus Las Lagunillas s/n, 23071 Jaén, Spain



Introduction

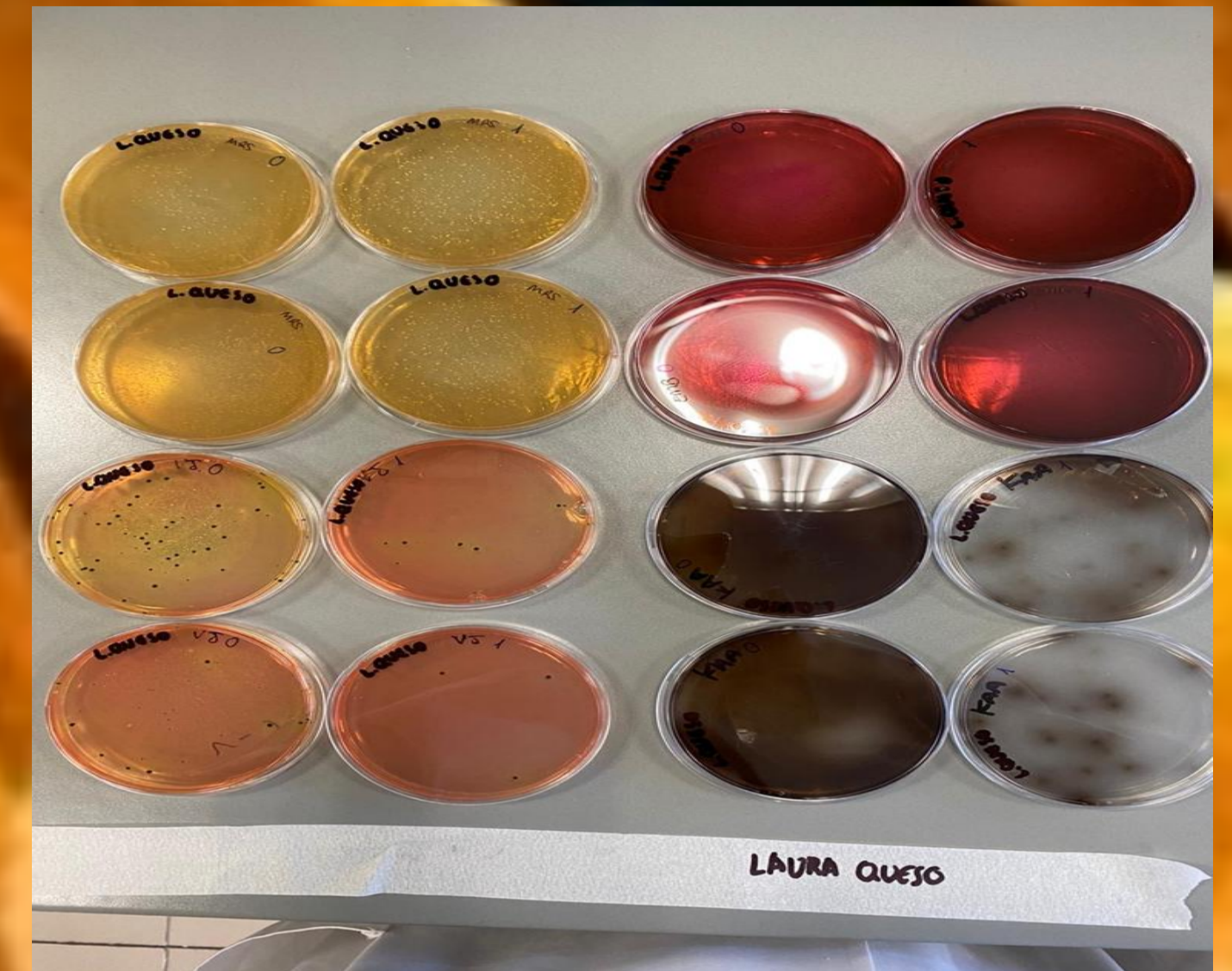
We shouldn't find pathogenic bacteria in food, but it might be present in minimal amounts. When there is a lack of hygiene in food, it is common to find pathogenic bacteria that can cost diseases. We have studied different food to check the microorganisms that they contain.

Objetives:

- Analysis of microorganisms present in different types of food using culture media.
- Study results.
- Identification of microorganisms under the microscope.

Methodology:

1. Sample preparation.
2. Serial solutions.
3. Sow in different culture media.
4. Count and identification of bacteria under the microscope.



Results:

Food / media	TSA	EMB	VJ	KAA	MRS
leek	3.7×10^3	1.4×10^2	4.0×10^2	0	0
Penca	6.2×10^4	7.5×10^4	0	0	0
Chicken JG	5.3×10^5	5.2×10^2	4.2×10^3	3×10^2	8×10^3
chiken Ac	8.9×10^5	8.2×10^2	9.1×10^2	0	0
Yogourt	8.5×10^2	0	0	0	0
cheese 1	5.1×10^6	3×10^4	5.1×10^2	3×10^3	4.7×10^4
cheese 2	1.7×10^6	1.7×10^3	3.2×10^3	4×10^4	3×10^5
Lemon	7×10^3	2.5×10^2	0	0	1.5×10^4
CPC	5.9×10^4	2.0×10^2	2.5×10^2	0	1.5×10^3
turkey	3.2×10^3	0	2.0×10^2	3×10^5	0

Results analysis:

In the general medium, TSA, there is microbial growth in all food; white and yellow yeast stand out. We found Enterobacteriaceae in penca and cheese through the EMB. In the VJ, Staphylococci appear in vegetables, chicken and cheese. In the KAA, Enterococci are displayed in cheese and turkey. Lactobacillus and lactic bacteria have been observed through MBS.

Conclusion:

Food that have been analysed in the laboratory are mostly low in microbial load or it is found in very small quantity. In some processed food, like cheese, the content of microorganisms is higher, reaching 61%. Therefore, the substances we consume daily are not sterile, some have a low microbial load that does not usually affect the health of consumers.

