



EXTRACTION AND STUDY OF ANTIBACTERIAL ACTIVITY OF *EUCALYPTUS GLOBULUS* ACTIVE COMPOUNDS



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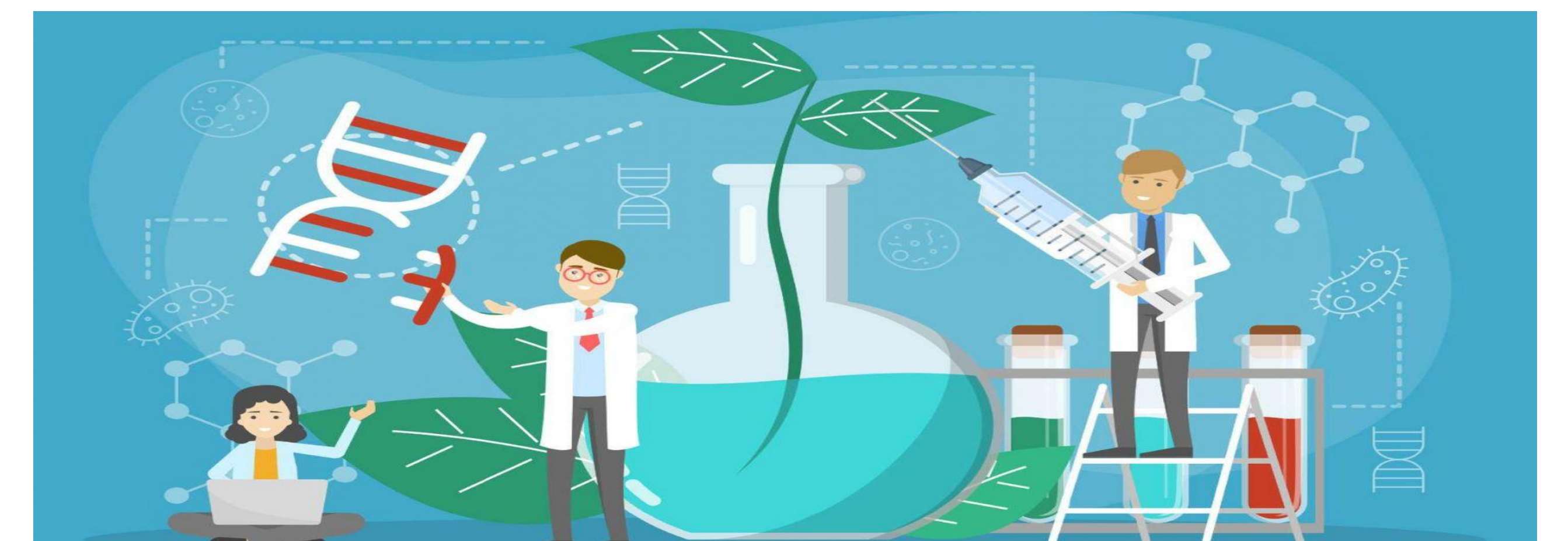
INTRODUCTION

- ❖ Covid-19 is the global crisis of our time and the biggest challenge we have faced since World War II. It's an infection that's caused by Sars-CoV-2, it happened in Wuhan, and then it spread rapidly to the rest of the world.
- ❖ Herbal medicine plays a role in the treatment of the disease, as traditional herbal medicines have been used in China since the first day of the epidemic.
- ❖ The use of medicinal plants has changed remarkably in recent years and especially during the pandemic, given its interest in health.

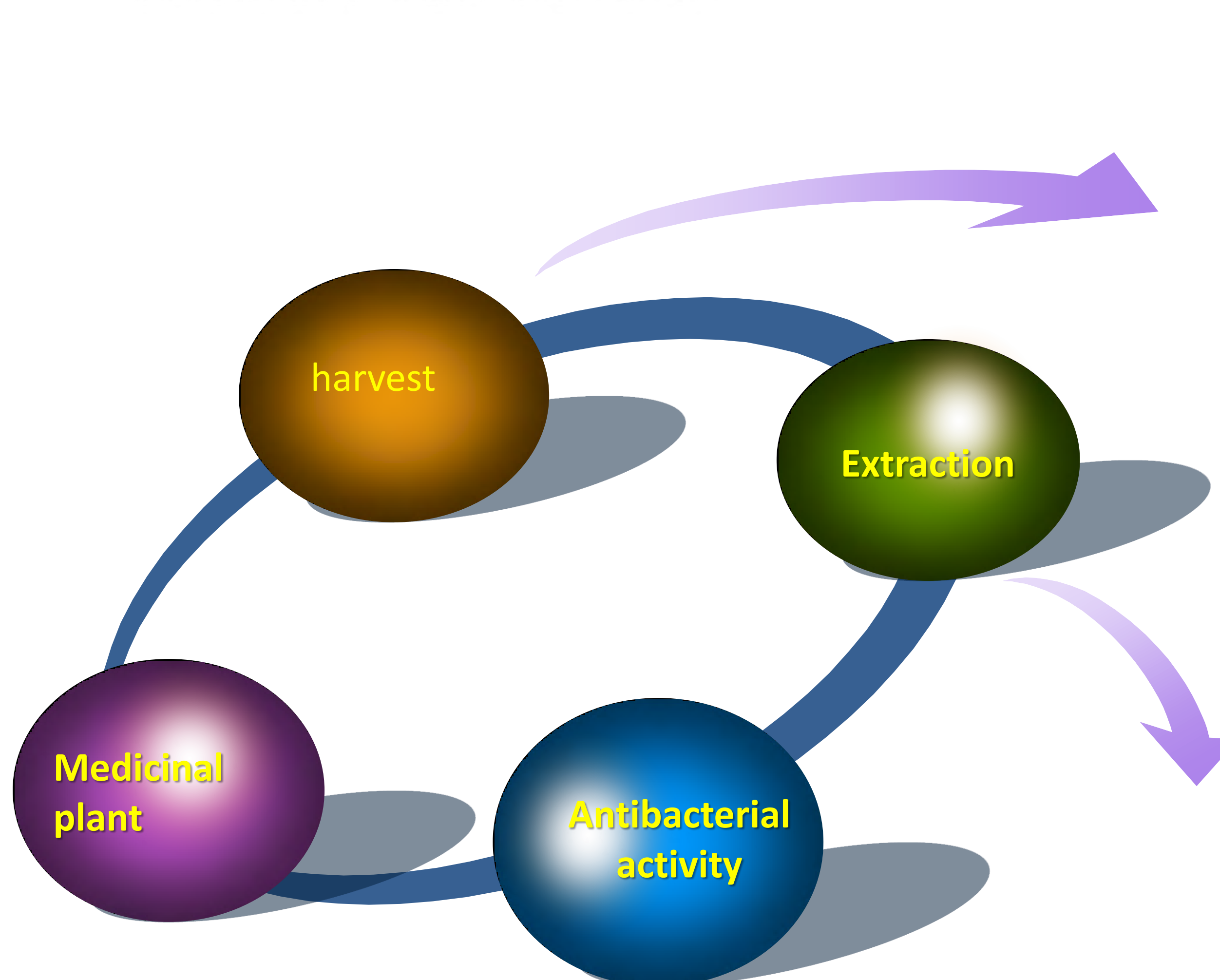


OBJECTIF

The objective of this work was to predict the antiseptic biological activity of *Eucalyptus globulus* against Sars CoV-2 by studying the antibacterial activity of the active compounds of the essential oil extracted from the endemic plant.



MATERIEL AND METHOD



Extraction

Ben djerrah – Guelma
19 Mars 2022

Zaarouria – souk ahras
25 Fébruary 2022

50.10 g

2 h 30 min

Réfrigérant à l'eau
ballon
Chaufe ballon

Antibacterial activity



RESULTS

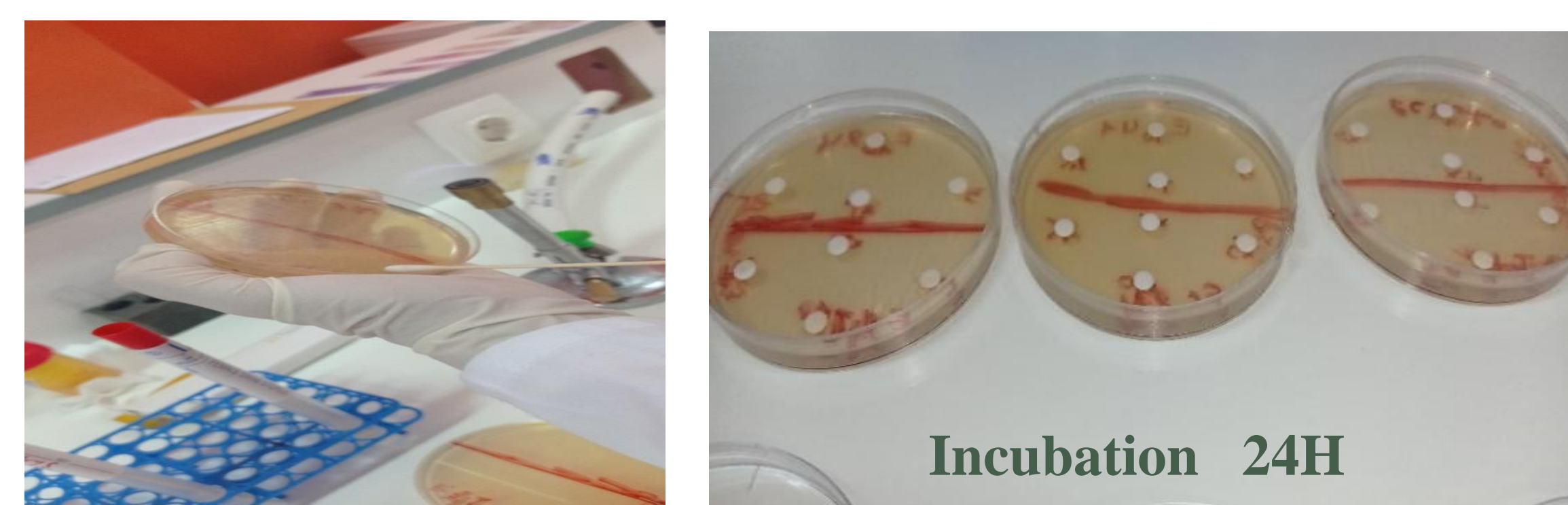
Extraction

	weight	Volume (ml)	Yeald of E.O
Eucalyptus globulus	50 g	0.3 ml	0,54 %

	Aspect	Color	smell
essentiel oil	Liquide	yellow	Good and strong

Antibacterial activity

- *Staphylococcus aureus*
- *Pseudomonas aeruginosa*
- *Escherichia coli*



Minimum inhibitory concentration CMI determined by the agar dilution method

CMI < 1/20

CONCLUSION

The extraction of essential oils from the leaves of *Eucalyptus globulus* by hydrodistillation type Clevenger; gave us an acceptable yield of 0.54%,

The study of antibacterial activity by the aromatogram method showed the sensitivity of both strains: *Staphylococcus aureus* and *Escherichia coli*, but the strain *Pseudomonas aeruginosa* is resistant, the minimum inhibitory concentrations obtained for the two susceptible strains are less than 1/20.

Eucalyptus globulus has many virtues and very rich bioactive molecules, this opens up prospects for developing antibiotic preparations based on plant fractions and essential oils of *Eucalyptus globulus*.

REFERENCE BIBLIOGRAPHIQUE

- [1] Étude de l'activité biologique d'huile essentielle de Juniperusthurifera. Thèse soutenue par Trad. Marwa le 08 octobre 2020 pour l'obtention du diplôme de Master en Biochimie
 [2] HAMEL Tarek, mars 2018. Researchgate. Pratique traditionnelle d'utilisation des plantes médicinales dans la population de la péninsule de l'Edough (nord-est algérien).

