



Phytochemical characterization and antibacterial potential of *Crassocephalum crepidioides* (Asteraceae) collected in two ecological regions of Cameroon

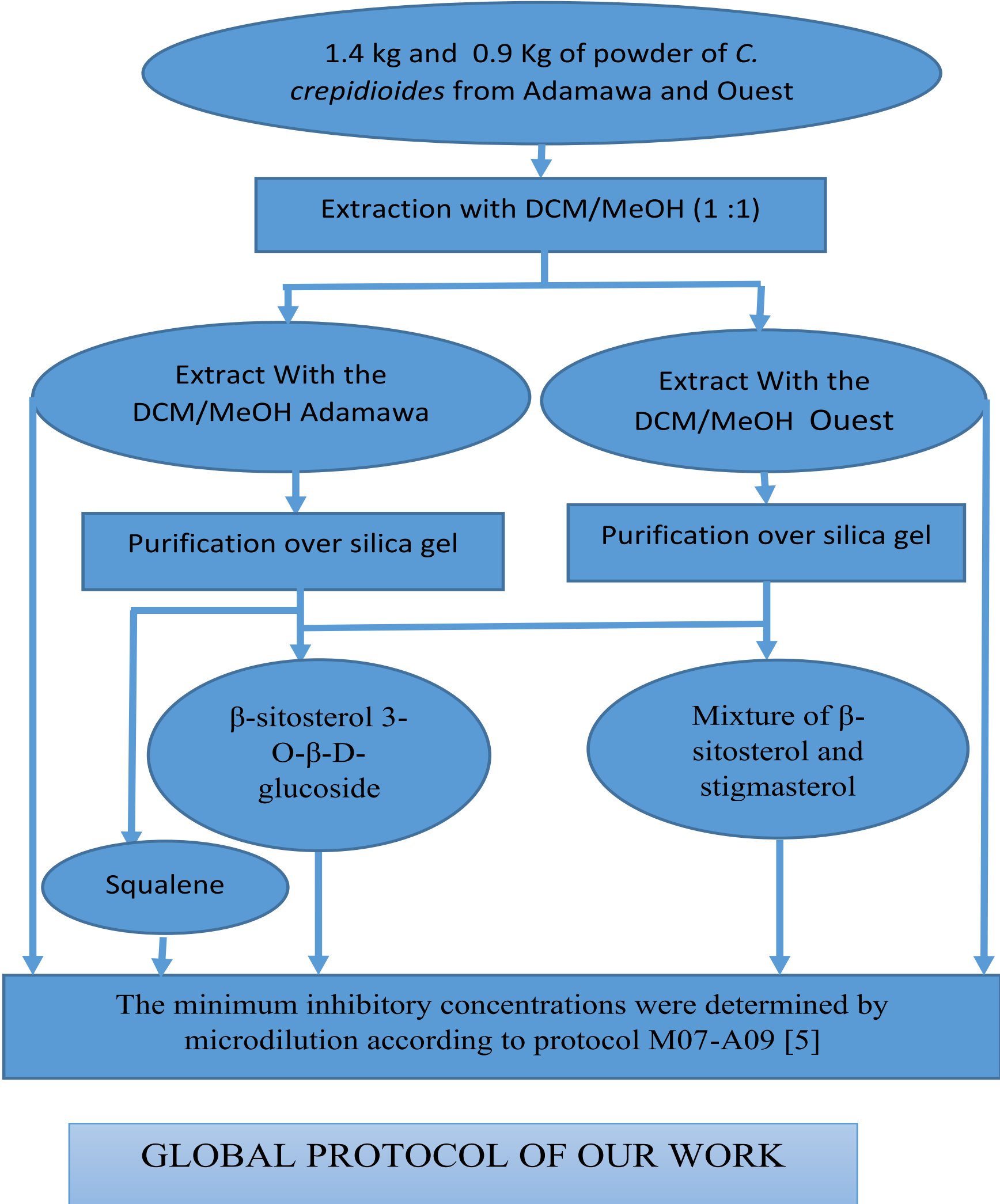


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INTRODUCTION

Antimicrobial resistance is one of the ten global public health threats facing humanity. The World Health Organization considers it a priority issue [1]. Today, due to the ever-increasing cost of medicines and the emergence of multi-resistant microbes, there is renewed interest in pharmacopoeia [2]. *Crassocephalum crepidioides* is a medicinal plant traditionally used to facilitate childbirth and treat digestive disorders, sleep disorders, stomach aches, wounds [3]. This plant is found in the Centre, in Adamawa, and in western Cameroon [4]. Our work consists of researching the secondary metabolites of the whole *C. crepidioides* plant that have antibacterial properties.

I. METHODS



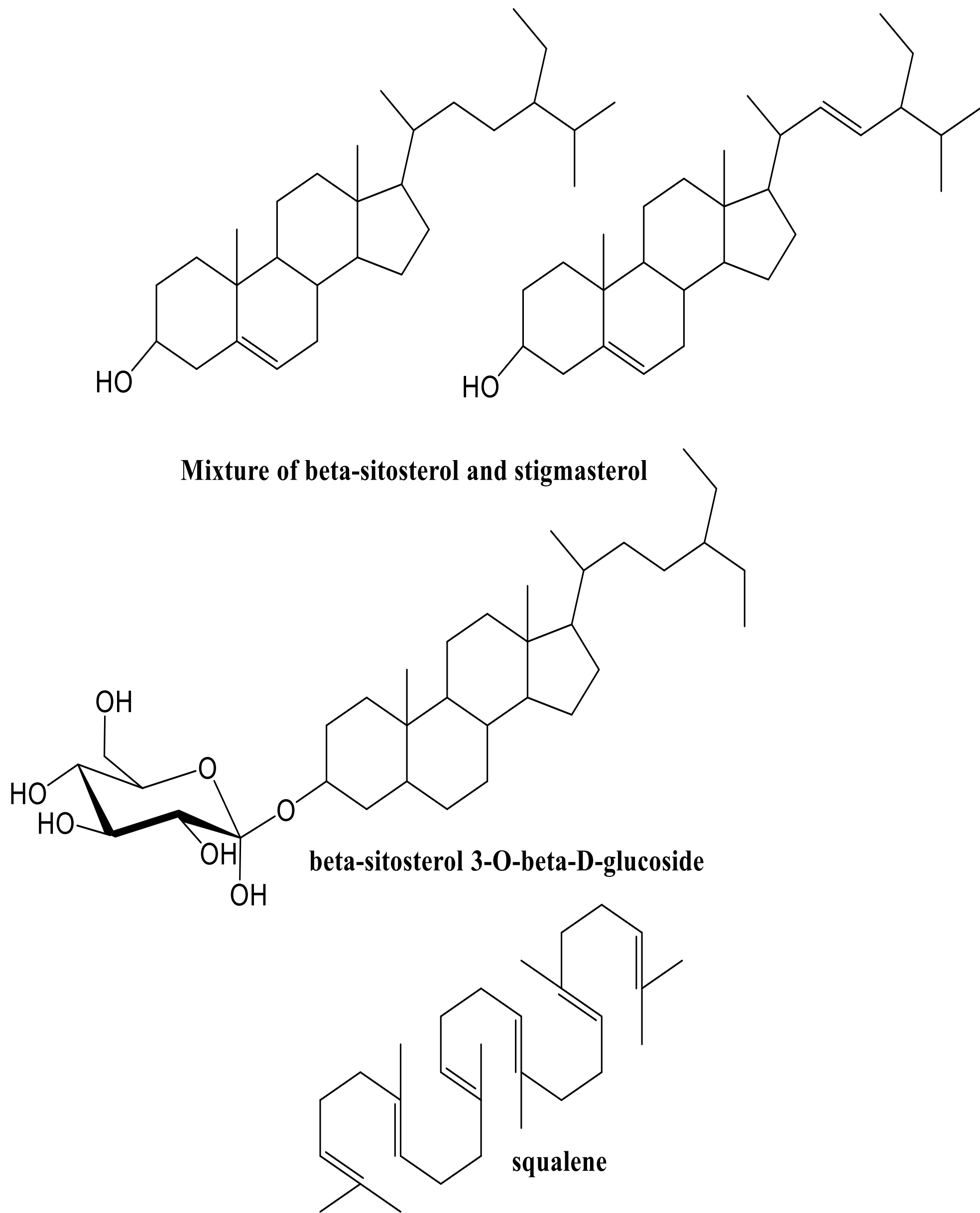
II. RESULTS

II. 1. Extraction results

Table 1: Extraction yield

	Masse s obtained Expected	masses extraction	yields
Crude extract in DCM/MeOH CCN	62 g	1400 g	4,4%
Crude extract in DCM/MeOH CCO	75,7g	900 g	8,4%

II. 2. Isolation results



II. 3. Antibacterial test results

Table 2: Minimum inhibitory and bactericidal concentrations of extracts and compound on a set of bacterial strains

Samples (extracts and compounds)	Parameters In mg/mL (extracts) ou µg/mL (simples)	AC NR 9667	KP NR 13810	SA CPC	EC CPC	EF CPC
<u>Extract of DCM/MeOH (CCN)</u>	MIC	> 10	> 10	10	10	10
	MBC	> 10	> 10	10	10	10
	MBC/MIC	/	/	1	1	1
Extract in DCM/MeOH (CCO)	MIC	10	2,5	5	2,5	5
	MBC	10	10	10	10	10
	MBC/MIC	1	4	2	4	2
Squalene	MIC	> 200	> 200	> 200	200	> 200
	MBC	> 200	> 200	> 200	> 200	> 200
	MBC/MIC	/	/	/	/	/
CP (µg/mL)	MIC	0,0312	0,0312	0,0312	> 2	0,0156
	MBC/MIC	0,0624	0,0624	0,0624	> 2	0,0312
	MBC/MIC	2	2	2	/	2

MIC: Minimum Inhibitory Concentration; MBC: Minimum Bactericidal Concentration;
AC NR : *Acinetobacter baumannii* ; KP NR 13810: *Klebsiella pneumoniae* ;
SA CPC: *Staphylococcus aureus* (clinical isolate from the Pasteur Center in Cameroon) ;
EC CPC: *Escherichia coli* (clinical isolate from the Pasteur Center in Cameroon) ;
EF CPC : *Enterococcus faecium* (clinical isolate from the Pasteur Center in Cameroon) ;
/: ()undetermined) ; C : Positive control (ciprofloxacin).

CONCLUSION

The two extracts led to the isolation of several compounds, three of which were identified. The DCM/MeOH extract from the West has very significant activity on all fungal strains tested. Squalene has very low activity on the strains tested. C.C from the West can be used as an antibacterial agent on the strains tested after studying its toxicity.

- [1] WHO, 2015. Global action plan on antimicrobial resistance, World Health Organization.
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