



Anti-Inflammatory and Hepatoprotective Activities of *Olaw subscorpioidea* Essential Oil

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O.subscorpoidea,stink ant forest, is an aromatic plant of the *Olacaceae* family, is native to across Africa, particularly in West and Central Africa[1].



Pharmacology

- Anti-inflammatory
- Antibacterial
- Anticancer
- Antibacterial
- Antimicrobial
- Antiulcer

Fig. 1: *O.Subscorpoidea* leaves

Phytochemistry

Squalene, linoleic acid, Nonacosane, stearic acid, and eugenol acetate are dominant [2]

Aim

To isolate, characterize the essential oil, and evaluate the anti-inflammatory activities of *O. subscorpioidea*.

Objectives

- Isolate the essential oils using a Hydro-distiller
- Evaluate the oils using a GC-MS
- Evaluate the hepatoprotective using
- Analyse the anti-inflammatory activities using the

Methodology

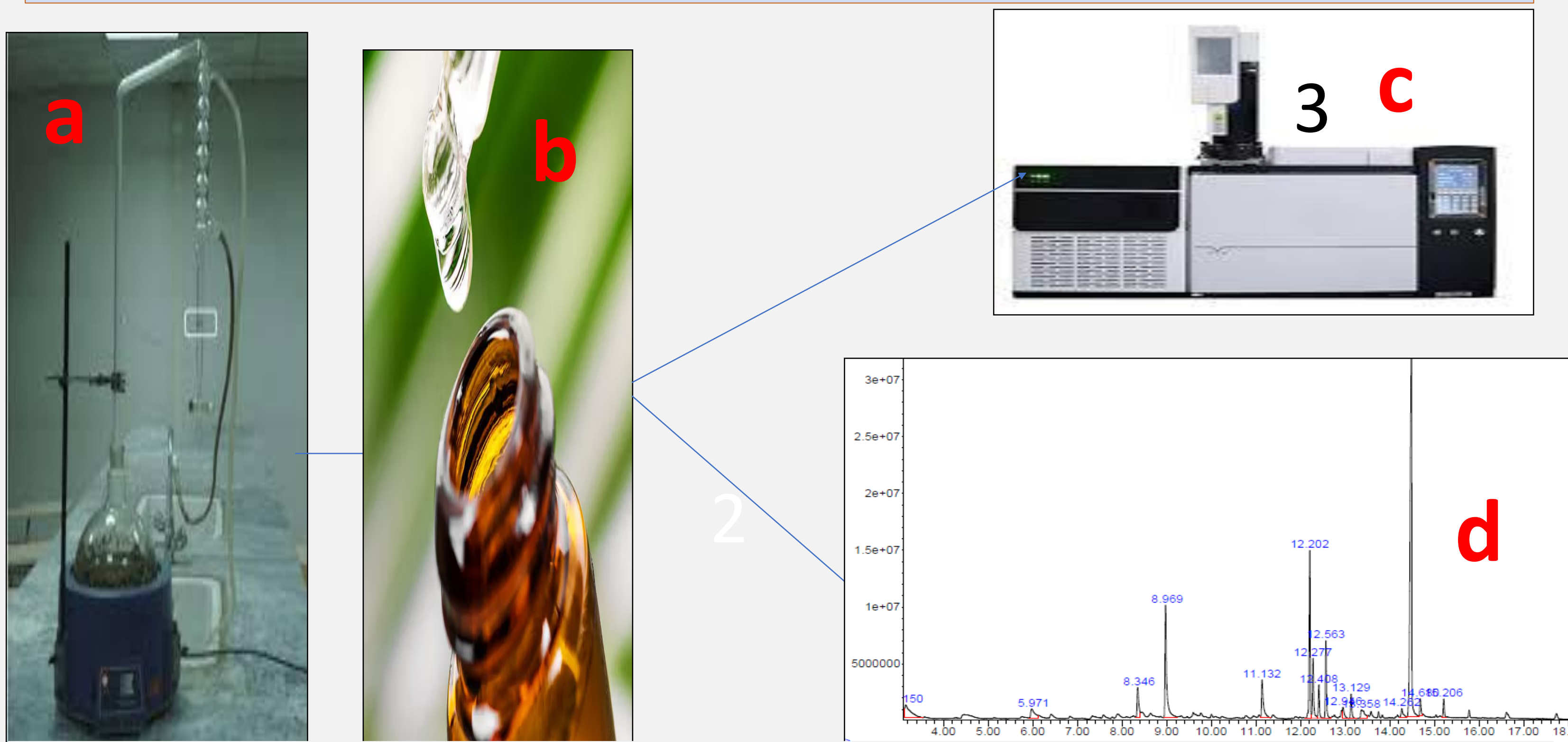


Fig. 2: a: Hydrodistiller; b. Essential oil; Image c- GC-MS; Image d; Chromatogram

- Liver Damage assays (ALT, AST, ALP)
- Inflammations: Interleukins: IL-1 β , IL-6, IL-10, IL- α

Results

The major components of the essential oil include:

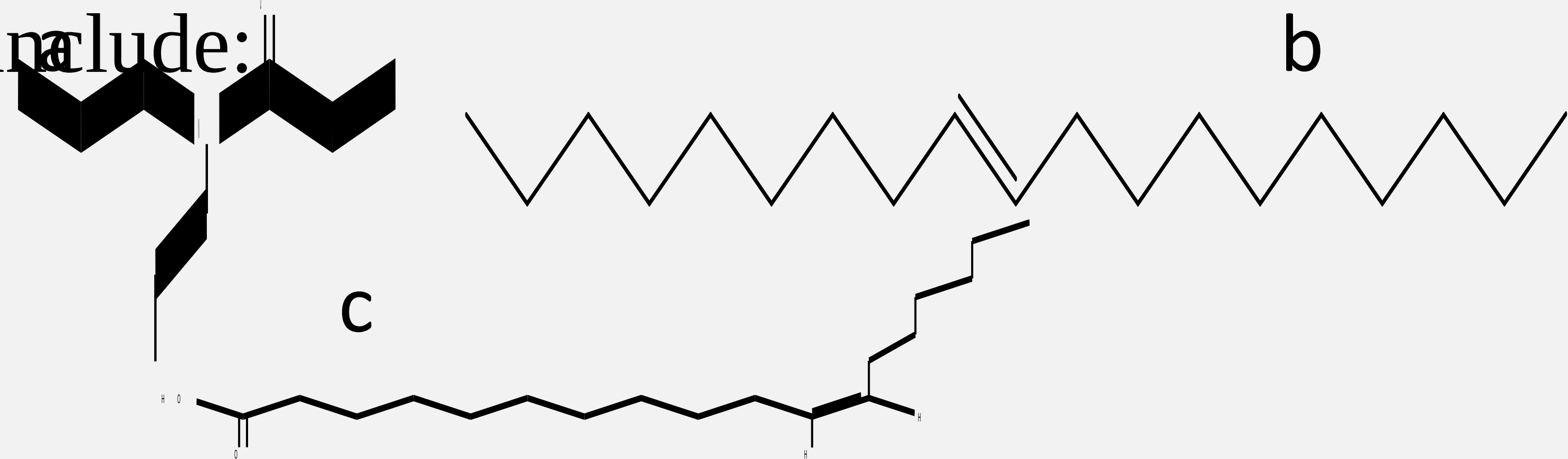


Fig 3:a: Propanimide, b:9-Nonadecene, c: cis-vaccenic acid.

Results

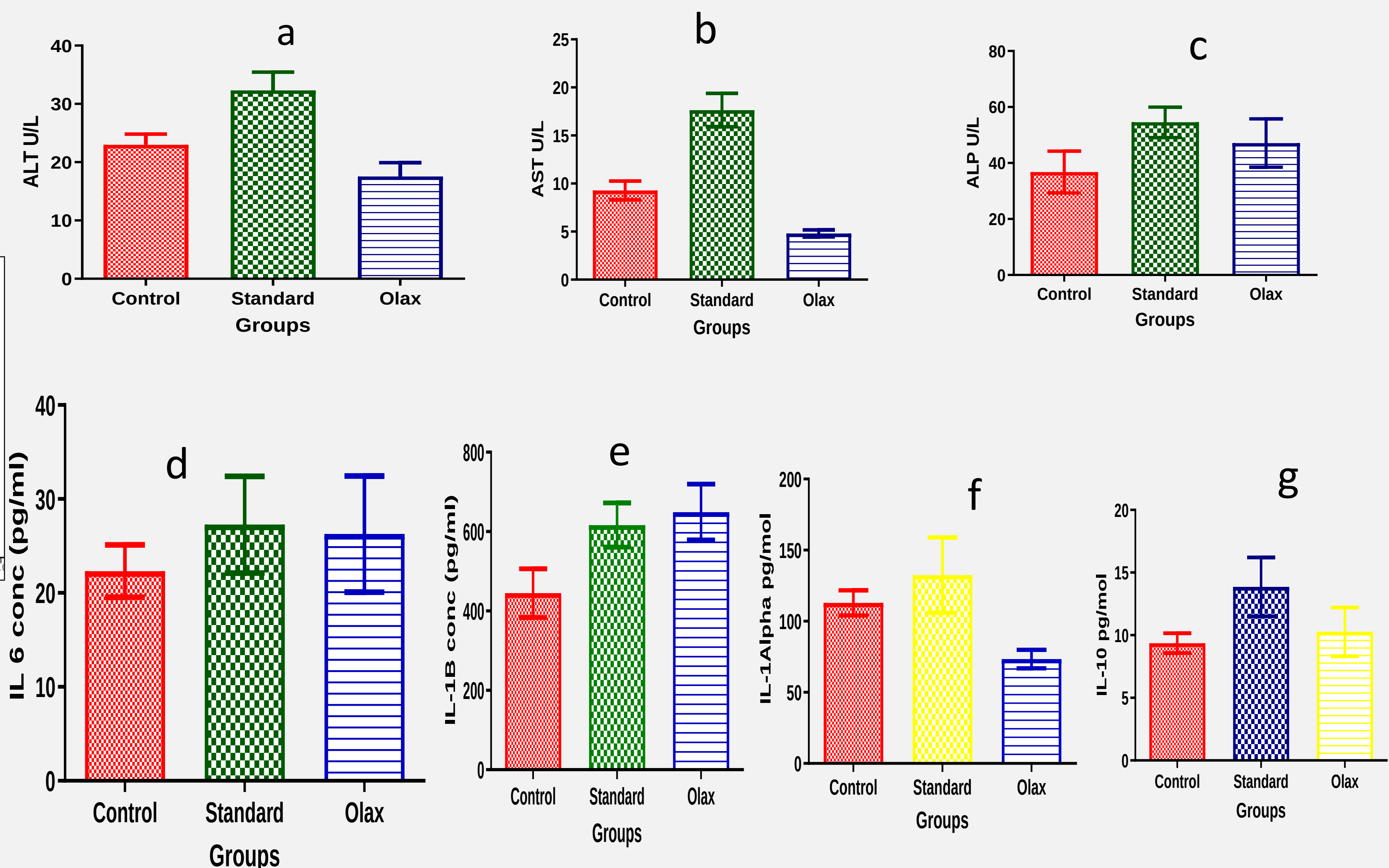


Figure 4: Showing the (a)ALT(b)AST(c)AST(d)IL-6(e)IL-1 β (f)IL-1 α and (g)1L-10.Each column represent mean $\pm$ SEM

- The extracts are relatively safe at therapeutic doses for the liver
- It alters the proliferation of pro-inflammatory cytokines(1L-6,1L-10,1L-1 α and IL-1 β) between 5-75 pg/ml.

Conclusion

The extracts are not toxic at the concentration used and possess anti-inflammatory properties. These findings provide scientific validation for the traditional use of these plants in managing inflammatory conditions

Refrences

- 1.Abdulazeez, I., Lawal, A. Y., & Aliyu, S. (2015). Phytochemical screening and antimicrobial activity of the solvent fractionated leaves extract of *Olaw subscorpioidea*. *Journal of Chemical and Pharmaceutical Research*, 7(9), 22–26.
2. Chetia, B., & Phukan, A. (2014). Chemical Composition and Antioxidant Activities of the Essential oil of *Olaw acuminata*. *JEORP*, 17(4), 696–701. .