

BEWIT FRANCHISE, s.r.o.  
Michalská 2030,  
Slezská Ostrava,  
710 00 Ostrava  
IČO: 29443237  
BEWIT.LOVE, SHARE.LOVE



# GC ANALYSIS REPORT

## DESCRIPTION / POPIS

NAME / NÁZEV	INCI NAME	CAS-No
Lemongrass	<i>Cymbopogon Citratus Oil</i>	8007-02-1

## SPECIFICATION / SPECIFIKACE

ORIGIN / PŮVOD	COLOUR / BARVA	ODOUR / VŮNĚ, ZÁPACH
China	Pale yellow	Citrus

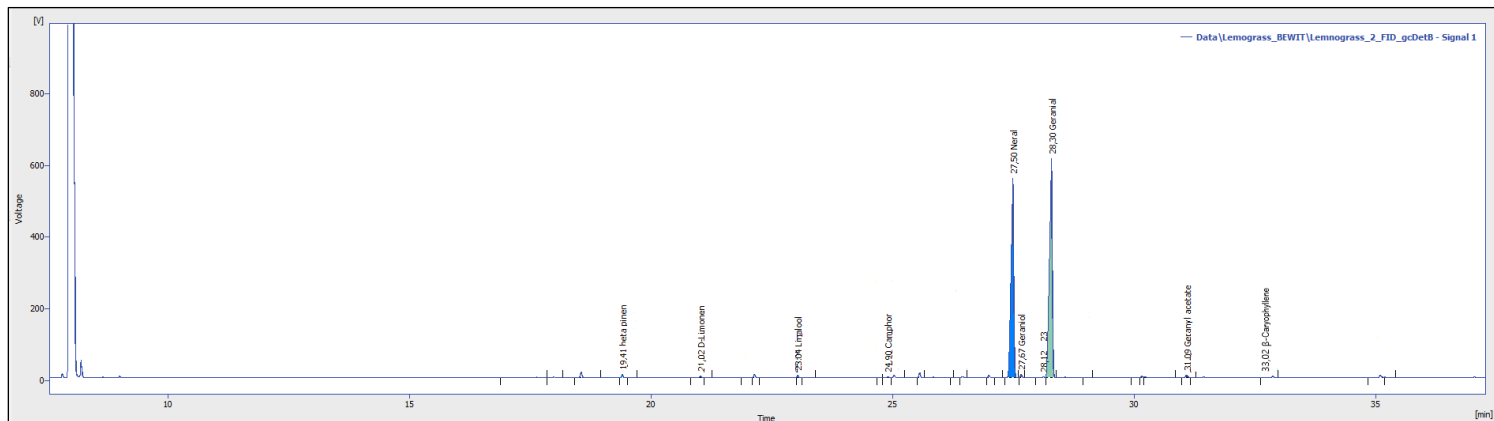
APPEARANCE / VZHLED	SOURCE / ZDROJ	PRODUCTION / VÝROBA
Clear liquid	Plant	Steam distilled

## COMPONENTS / SLOŽKY

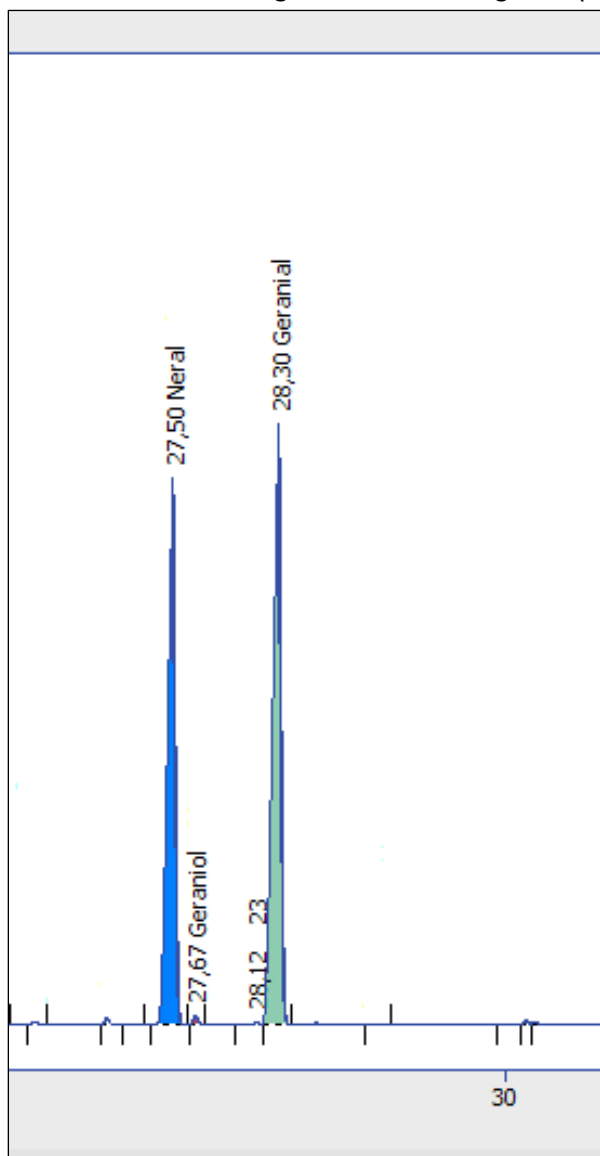
COMPOUND / SLOUČENINA	RELATIVE CONTENT / OBSAH [%]	RETENTION TIME / RETENČNÍ ČAS
Geranial (Citral A)	50,2	28,30
Neral (Citral B)	42,6	27,50
Geraniol	0,5	27,67
Geranyl acetate	0,5	31,09
β-Pinen	0,4	19,41
Linalool	0,3	23,04
D-Limonen	0,3	21,02
β-Caryophyllene	0,2	33,02

## CHROMATOGRAM WITH IDENTIFICATION PEAKS

Picture 1. – Lemongrass chromatogram (solvent used in the analysis, major and minor representation of peaks)

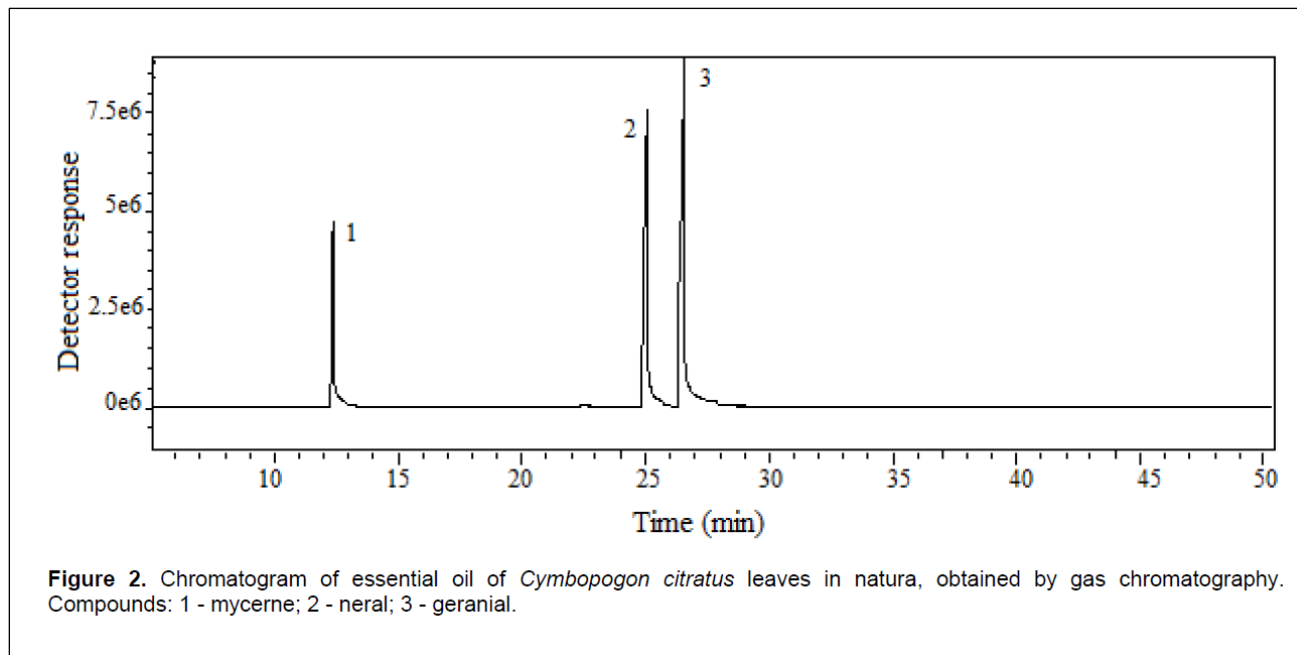


Picture 2. – Lemongrass chromatogram (major representation of peaks without solvent)



- **Comparison, scientific studies**

Picture 3. – Chemical composition of essential oil of *Cymbopogon citratus* oil [1]



[1] RONICELY, Pereira Rocha, de Castro Melo EVANDRO, Henrique Silva dos Santos RICARDO, Roberto Cecon PAULO, Dallacort RIVANILDO a Santi ADALBERTO. Influence of plant age on the content and composition of essential oil of *Cymbopogon citratus* (DC.) Stapf. *Journal of Medicinal Plants Research* [online]. 2014, **8**(37), 1121-1126 [cit. 2020-04-02]. DOI: 10.5897/JMPR2013.5549. ISSN 1996-0875. Dostupné z: <http://academicjournals.org/journal/JMPR/article-abstract/839072148090>.

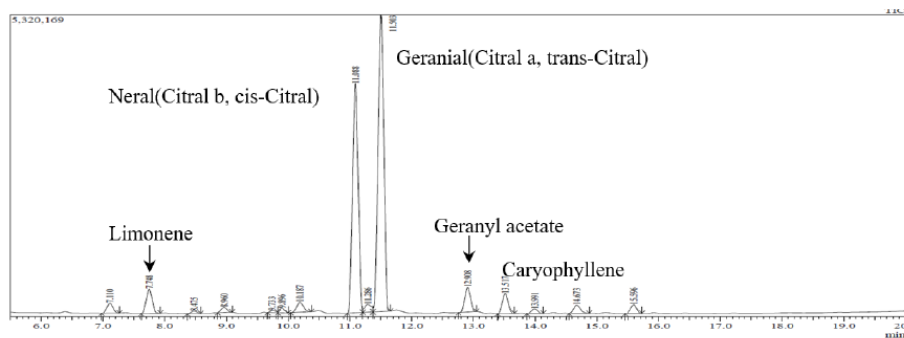


Figure 7: GC/MS Total Ion Chromatogram(TIC) of Lemongrass oil (*Cymbopogon flexuosus*, Germany)

Figure 7 is the GC/MS TIC of Lemongrass oil. The Lemongrass oil predominantly contained neral(Citral b, cis-Citral) (34.35 %) and geranial (44.78 %) that elutes at 11.09min and 11.50min. Other components identified were limonene (3.76%, 7.75min), geranyl acetate (3.71%, 12.91min), caryophyllene (3.02%, 13.52min). These citral components of Lemongrass essential oil have been reported to exhibit antibacterial activity [11, 23].

[2] ADUKWU, Emmanuel C., Melissa BOWLES, Valerie EDWARDS-JONES a Heather BONE. Antimicrobial activity, cytotoxicity and chemical analysis of lemongrass essential oil (*Cymbopogon flexuosus*) and pure citral. *Applied Microbiology and Biotechnology* [online]. 2016, **100**(22), 9619-9627 [cit. 2020-04-02]. DOI: 10.1007/s00253-016-7807-y. ISSN 0175-7598. Dostupné z: <http://link.springer.com/10.1007/s00253-016-7807-y>.