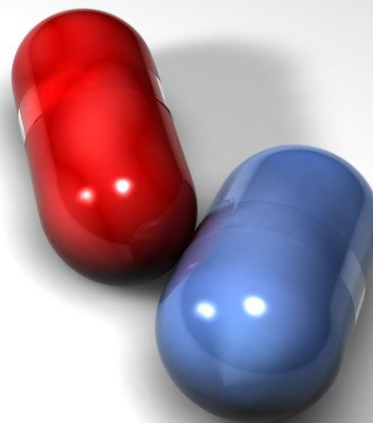


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was completely evaporated and subjected for spectral analysis.

1-Tetradecanol was isolated as white crystalline solid and the molecular formula was proposed as $C_{14}H_{30}O$ based on HR-EIMS showing an ion at m/z 213.4900 (calculated for 214.22980); The FT-IR spectrum of compound reveals a broad peak situated at 3444 cm^{-1} which is assigned to O-H stretching vibration. The peaks at 2954 , 2918 and 2848 cm^{-1} are assigned to C-H stretching vibrations of methyl group, respectively to asymmetric and symmetric stretching vibrations of methylene groups. At 1463 cm^{-1} it was identified the C-H scissoring vibration, while at 954 cm^{-1} it was found the C-O stretching vibration. The rocking vibration of methyl group was easily detectable in the spectrum at 729 cm^{-1} . ^{13}C NMR (CDCl_3) spectrum revealed the presence of one methyl and 13 methylene groups. δ 64.57 (C-1), δ 29.86 (C-2), δ 22.85 (C-3), δ 29.82 (C-4), δ 25.20 (C-5), δ 29.52 (C-6), δ 29.42 (C-7), δ 29.32 (C-8), δ 29.64 (C-9), δ 26.10 (C-10), δ 32.08 (C-11), δ 28.81 (C-12), δ 34.59 (C-13), δ 14.27 (C-14); ^1H NMR (CDCl_3) spectrum showed a triplet at δ 0.86 ($J=7.2\text{ Hz}$), a multiplet at δ 1.25 and δ 4.06 ($J=6.9, 9.5\text{ Hz}$) revealing that it was a straight chain fatty alcohol. The FT-IR and NMR data in Figure 1 were identical to the published data of myristyl alcohol (1-tetradecanol) (Naz et al., 2015).

1-Tetradecanol was reported to have benefits on skin whitening, moisturizing, alopecia, and also used as an ingredient in cosmetics such as cold creams, lotions

(Lee et al., 2015). It may be a potent candidate used in cosmetic industry. To the best of our knowledge this is the first report on isolation of 1-tetradecanol from *H. enneaspermus*.

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References

- Immanuel RR, Elizabeth LL. Weeds in agroecosystems: A source of medicines for human healthcare. *Int J Pharm Tech Res.* 2009; 1: 375-85.
- Lee SY, Choi EJ, Bae DH, Lee DW, Kim S. Effects of 1-tetradecanol and β -sitosterol isolated from *Dendropanax morbifera* Lev. on skin whitening, moisturizing and preventing hair loss. *J Soc Cosmet Sci.* 2015; 41: 73-83.
- Naz S, Saied S, Zahir E, Siddiqi H. Characterization of new lignan and alcohol from the water extract of *Ipomoea cairica*. *Int J Adv Res.* 2015; 3: 190-96
- Patel DK, Kumar R, Sairam K, Hemalatha S. *Hybanthus enneaspermus* (L.) F. Muell: A concise report on its phyto-pharmacological aspects. *Chin J Nat Med.* 2013; 11: 199-206
- Retnam KR, De Britto AJ. Phytochemical analysis of a medicinal plant *Hybanthus enneaspermus* (L.) F. Muell. *J Econ Taxon Bot.* 2003; 27: 701-06.