

DO THE VARIOUS HAND SANITIZERS USED IN JOHANNESBURG AREA, DURING THE COVID-19 PANDEMIC CONTAIN THE RECOMMENDED CONCENTRATION AND QUALITY OF ALCOHOL?

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Background

Since the outbreak of SARS-CoV-2, Covid-19, WHO has recommended that, in absence of water, hand sanitizer can be used to prevent the transmission of coronavirus. Consequently, the regulations issued in terms of the Disaster Management Act in South Africa, stipulate that businesses must provide hand sanitizer, free-of-charge, for use by the public and employees at the entrance to their premises. Unfortunately, many media reports indicate that majority of these hand sanitizers are substandard. Various regulators around the world have also cautioned about presence of potentially toxic ingredients in some hand sanitizer preparations.

Objective

As part of public awareness campaign and contribution in the fight against the Covid-19 pandemic, the project aimed to identify sanitizers used in the Johannesburg area that do not contain the recommended alcohol concentration of at least 60% and may contain toxic ingredients.

Materials and Methods

Hand sanitizer samples were collected from various traders around Johannesburg. Following appropriate sample preparation, the samples were analysed using Headspace Gas Chromatography with Flame Ionization Detection.

Results and Discussion

Of the 94 different hand sanitizers collected, four sanitizer preparations were found to contain no alcohol, whereas the rest contain either ethanol or 2-propanol or a combination of these two. Of these, 37 (40%) contain less than 60% alcohol. Toxic alcohol denaturants (ethyl acetate and isobutanol) and other non-recommended alcohols (methanol, 1-propanol and 3-methyl-butanol) were also identified in these preparations.

Conclusion

While many (56%) brands of hand sanitizer found around Johannesburg contain the recommended concentration of alcohol, there are also many (44%) substandard preparations. Some sanitizers contain in addition toxic ingredients; hence it is recommended that all consumers (workplaces and the public in general) be aware of untrustworthy brands of hand sanitizer. The use of hand sanitizer with no virucidal activity may give a false sense of security, while people using sanitizers containing toxic ingredients will likely suffer from the associated risks.