

Could electronic tongue be used to assess the taste variation of an oral reconstructed suspension after being stored under the recommended storage conditions? Panel taste/Electronic tongue correlation

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Abstract

Background:

The taste of oral liquid dosage forms is a crucial factor that impacts pediatric patient compliance. The electronic tongue (ET) is an emerging tool that could be useful in taste assessment in order to minimize the involvement of humans in such evaluations.

Purpose:

The aim of this study is to evaluate the potential use of ET to assess the taste variation of oral suspension after reconstitution and storing under the recommended storage conditions.

Method:

Commercially available (A&C) suspensions (the brand Augmentin® and three generic Ogmin®, Clamoxin® and Moclav®) were reconstituted and stored in refrigerator to assess their taste day after day for one week. The taste of these products was assessed using alpha-astree ET and the obtained results were compared with those obtained from an in vivo panel taste assessment which was conducted on pediatric patients using a hedonic panel test.

Results:

All suspension showed the same pathway regarding the taste which was detected by panel test in fact; we can see a low score of taste at the beginning of reconstitution then, an improvement of the score immediately after one day, then a study state for another two days, after that (the fifth day) a decay in the score was observed in both ET and panel tests.

Conclusion:

The ET gave results similar to those from panel test. Accordingly, we suggest the use of ET to assess the change of the taste during stability period to avoid exposing volunteers or pediatric to a such unethical test.