PHARMACEUTICAL COMPOUNDING IN PAEDIATRIC PATCH TESTING: ARE WE SURE ABOUT THE ACTUAL ACTIVE INGREDIENT CONCENTRATION?

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BACKGROUND AND IMPORTANCE

Large differences in active ingredient (AI) concentrations in drug patch tests, as a result of the drug source chosen, bring out the need for further studies to ensure the quality of the preparations.

AIMS AND OBJECTIVES

To analyze the variability of the resulting AI concentrations in paediatric patch tests, according to the commercialized forms (CF) used.

MATERIALS AND METHODS

A review of the recommendations of drug patch tests preparation was carried out in PubMed.

For the Allergy Department requested compounds, when no pure drug was commercially available, the CF were used instead. In the latter case, following the Spanish Society of Allergy and Clinical Immunology (SEAIC) recommendations, the CF weight's were used, rather than their AI content, to obtain the prescribed drug concentration in the compounds. Finally, the actual AI concentration in each compound was calculated.

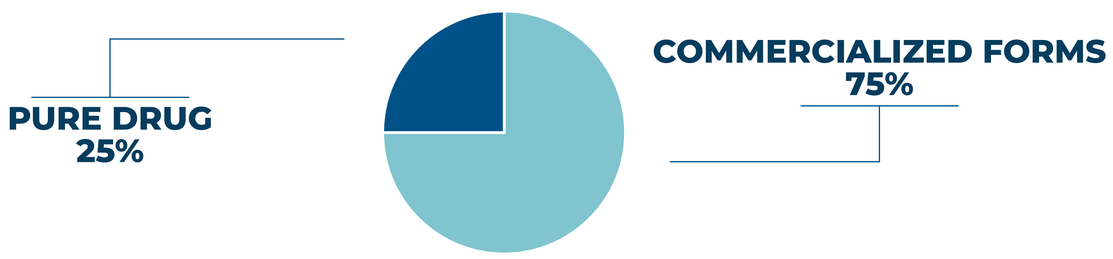
RESULTS

The SEAIC and the European Society of Contact Dermatitis (ESCD) recommend for drug patch tests preparation:

1. Whenever possible, use the pure drug.
2. When the pure drug is not available, resort to the CF weight's to obtain the prescribed drug concentration in the compounds.

8 drugs were diluted at different concentrations in petrolatum

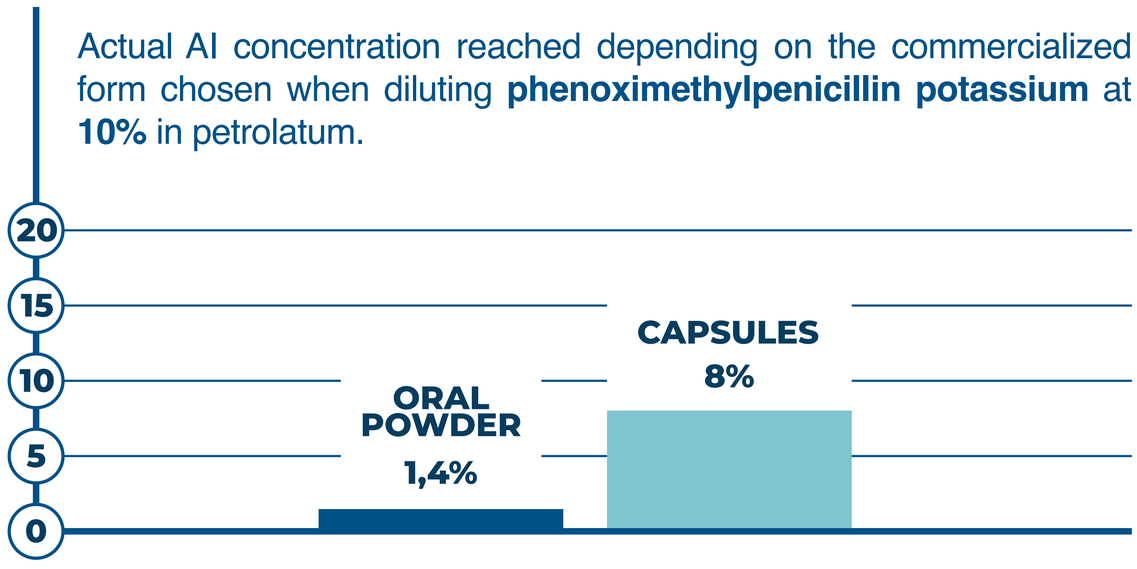
Distribution of the requested drugs depending on the source available.



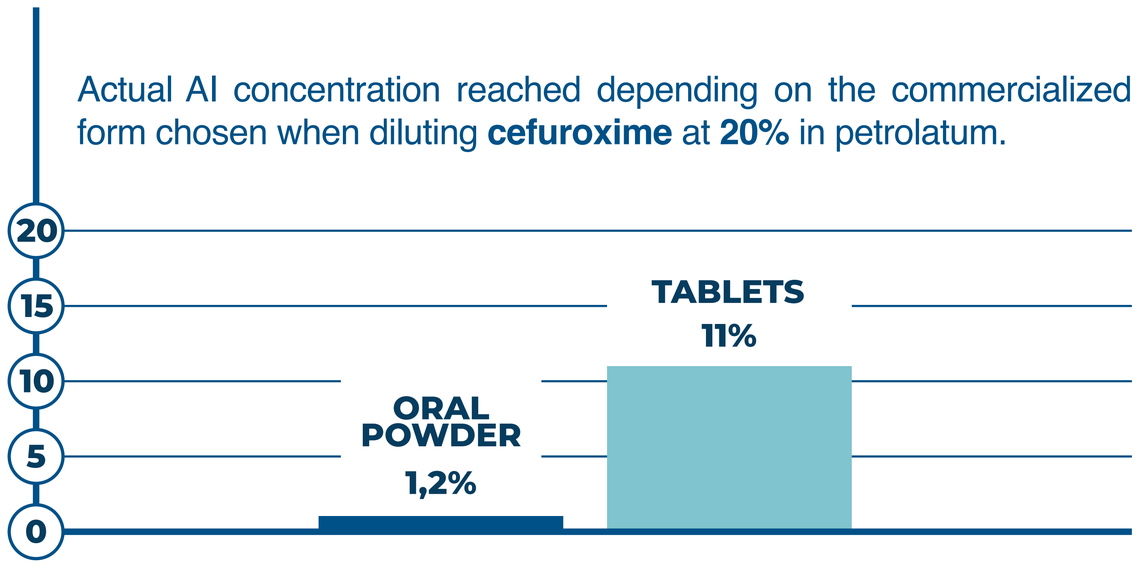
Actual AI concentration reached when diluting in petrolatum four drugs with a single CF, following the SEAIC and ESCD recommendations.

DRUG	COMMERCIALIZED FORM	DILUTION IN PETROLATUM	ACTUAL AI CONCENTRATION
RUFINAMIDE	TABLETS	3%	1'63%
AMPICILLIN	CAPSULES	5%	4'25%
ETHOSUXIMIDE	CAPSULES	20%	15'8%
BRIVARACETAM	TABLETS	30%	5,34%

Actual AI concentration reached depending on the commercialized form chosen when diluting **phenoximethylpenicillin potassium** at **10%** in petrolatum.



Actual AI concentration reached depending on the commercialized form chosen when diluting **cefuroxime** at **20%** in petrolatum.



CONCLUSIONS

- The actual AI concentrations in the compound vary depending on the CF used.
- Using the CF with the lowest amount of excipients allow obtaining AI concentrations closer to those usually proposed by scientific societies.
- The results obtained show the need to establish protocols with the Allergy Department in order to standardize the preparation and thereby assure quality and security in paediatric patch testing.

REFERENCES

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