Background
The hidradenitis suppurativa (HS) is an inflammatory skin disease that cause painful boils and abscess formation, especially localized in intertriginous areas. Resorcinol is phenol derivate, and in topical self-treatment decrease the size and pain of HS lesions. Topical 15% resorcinol is prepared as a pharmaceutical compounding and the current literature has no data on microbiological stability of formulations of topical resorcinol 15%. The European Pharmacopoeia (EP) establish on its chapter 5.1.4 the acceptance criteria for compounding’s microbiological quality control. Previous to the microbiological quality assay, the EP also establish the necessity of a suitability test of the method.

Material and methods
In order to determine the ability of microorganisms to grow in the studied formulation, several reference strains according the European Pharmacopoeia (chapter 2.6.12 and 2.6.13) were selected: Pseudomonas aeruginosa (ATCCVR 9027TM), Candida albicans (ATCCVR 10231TM), Aspergillus brasiliensis (ATCCVR 16404TM) and Staphylococcus aureus (ATCCVR 6538TM).

To perform the growth assay, trypticase soy agar (TSA) were used for P. aeruginosa and S. aureus, and sabouraud glucose agar (SAB) for C. albicans and A. brasiliensis.

The test was performed by taking a 1:1000 dilution of 1g of topical resorcinol in a 0,1% Tween80® and phosphate-buffered saline (PBS) solution and adding 100μL of a suspension equivalent at 1x10^3 cfu/ml of every ATCC strain, which were inoculated in TSA or SAB. All test was made by duplicate and medium lectures were made in 48h.

Results
The formulation composition of topical resorcinol 15% tested was:
- Resorcinol 15g
- Purified Water 15g
- Sodium metabisulfite 0.1g
- Lanette base cream q.s. 100g

The ability of ATCC strains to growth in resorcinol formulation was confirmed under the study conditions. There was a mean growth of 17x10^4 cfu/mL for S. aureus and 11x10^4 cfu/mL for P. aeruginosa in TSA. For A. brasiliensis and C. albicans, 1x10^4 cfu/mL and 2x10^4 cfu/mL were detected respectively.

Conclusions
The presented method shows a simplified way to test 15% topical resorcinol, microbiological viability for quality control.

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