



US006042845A

United States Patent [19]
Sun et al.

[11] **Patent Number:** **6,042,845**
[45] **Date of Patent:** ***Mar. 28, 2000**

[54] **ANTI FUNGAL TREATMENT OF NAILS**

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[57] **ABSTRACT**

[73] Assignee: **Johnson & Johnson Consumer
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There is disclosed a method for the treatment of fungal diseases in nails, which comprises the topical administration to the nail and, if desired, also to the surrounding skin, of (1) a sulfhydryl containing amino acid or a derivative thereof, the pharmaceutically acceptable salts or esters thereof, or stereoisomers thereof, (2) urea, (1) and (2) being administered in an amount sufficient to enhance the permeation of antifungal drugs through nail tissue, either prior to or, preferably, concurrently with the topical administration to the nail of (3) an effective amount of an antifungal drug. There is also disclosed a bandage adapted for the topical administration of medication to the nail, said bandage comprising a T-shaped adhesive backing, and a flexible pad having an impervious backing and a nail-shaped cavity backed by said impervious backing, wherein said nail-shaped cavity contains absorptive means having absorbed therein urea and a sulfhydryl containing amino acid or a derivative thereof, a pharmaceutically acceptable salt or ester thereof, or a stereoisomer thereof.

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: **08/922,041**

[22] Filed: **Sep. 2, 1997**

Related U.S. Application Data

[63] Continuation of application No. 08/361,413, Dec. 22, 1994, Pat. No. 5,696,164.

[51] **Int. Cl.**⁷ **A61L 15/16**

[52] **U.S. Cl.** **424/446**; 424/447; 424/448;
514/562; 514/946; 514/947; 514/953; 514/252

[58] **Field of Search** 514/252, 562,
514/588, 946, 947, 953, 399; 424/446,
447, 448

5 Claims, 17 Drawing Sheets

CFAD Exhibit 1005

FIG. 1

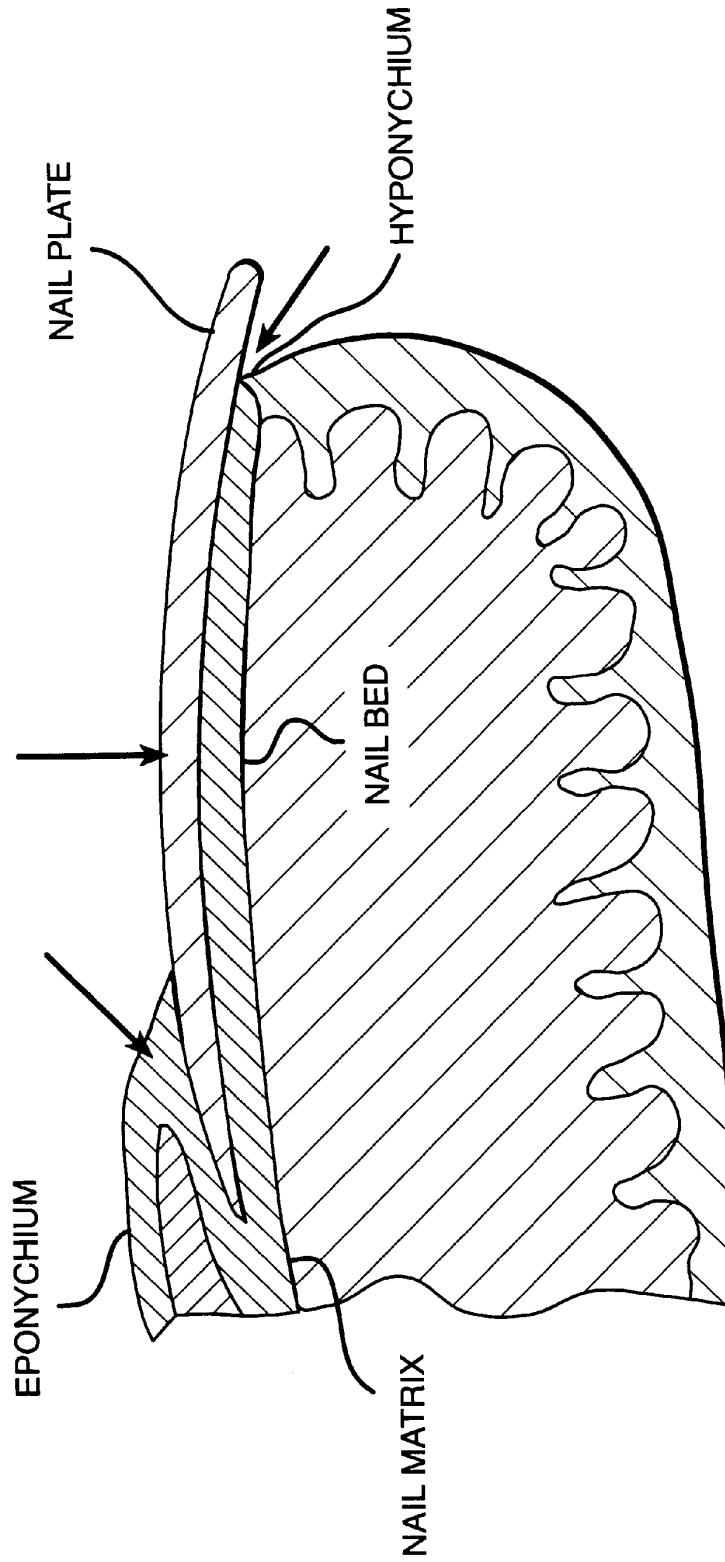


FIG. 2

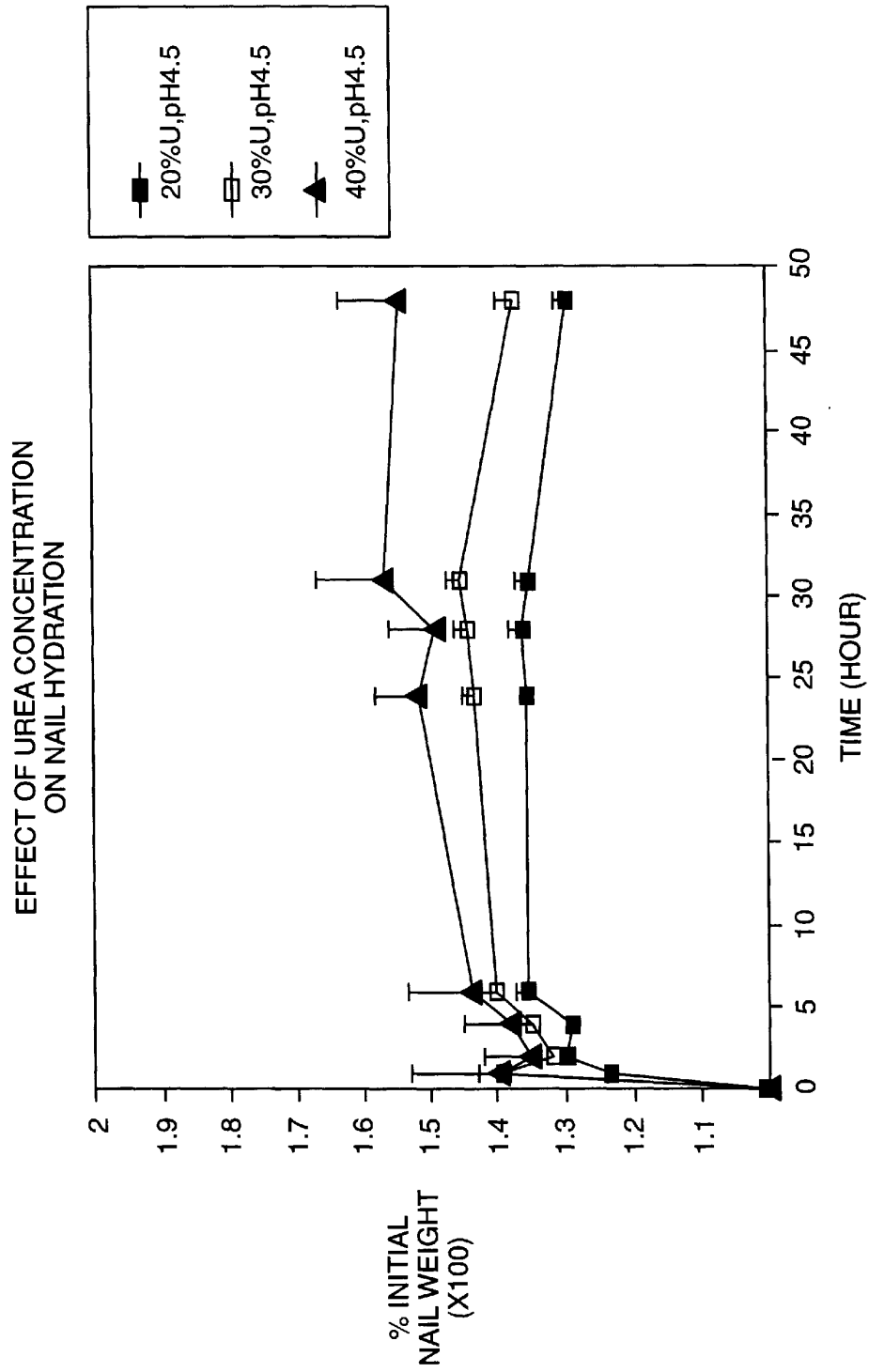


FIG. 3a

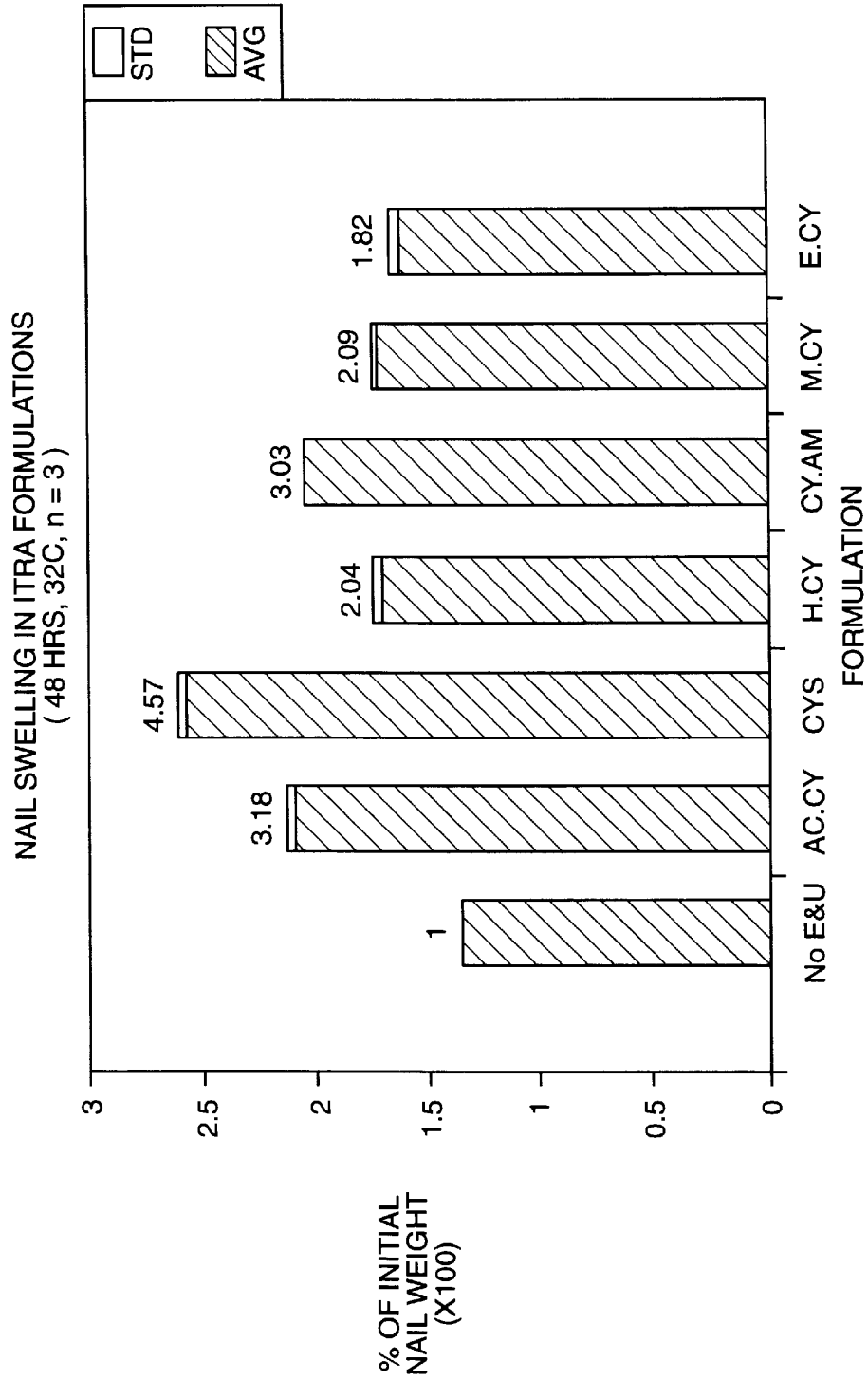
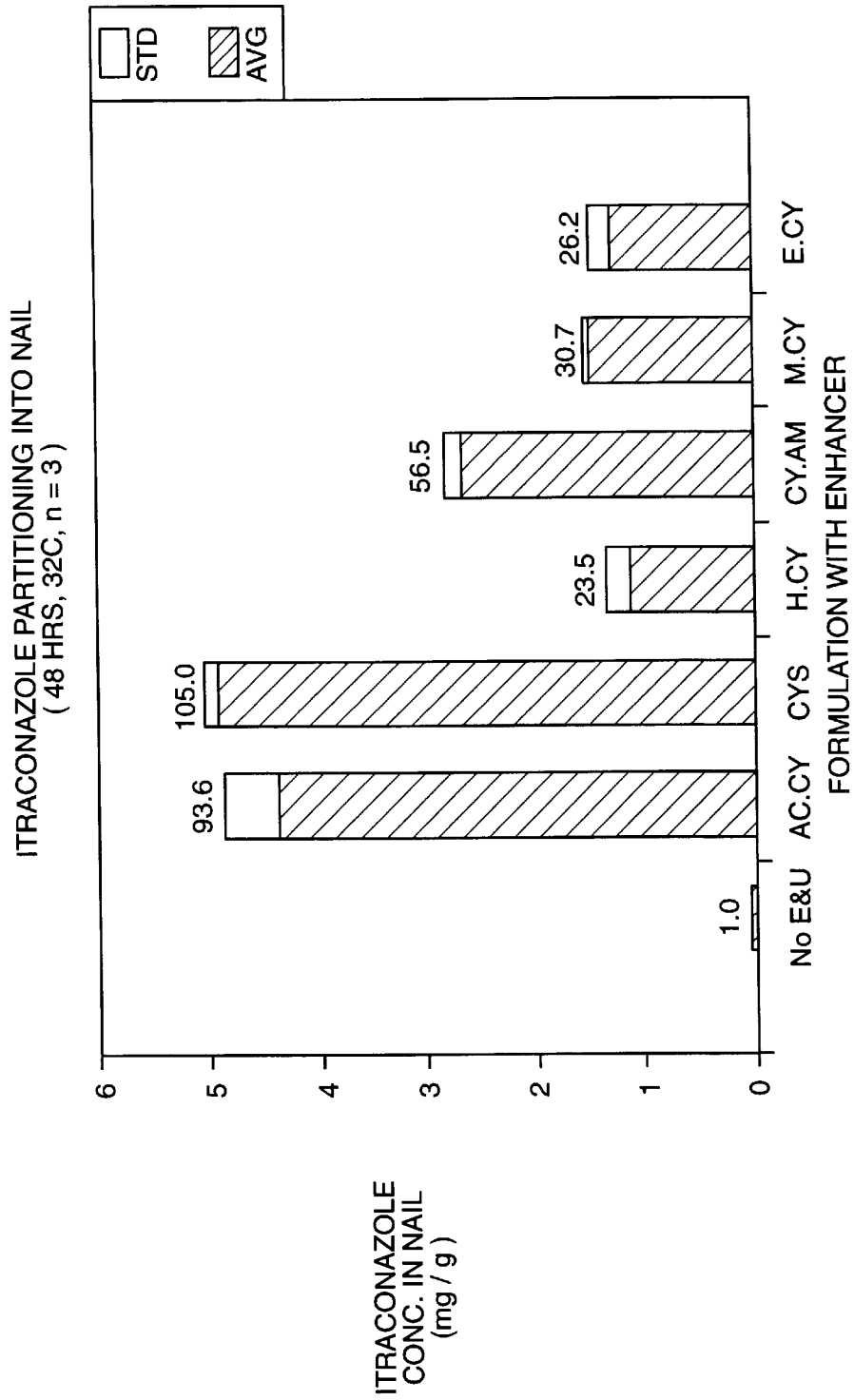


FIG. 3b



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