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United States Patent [19]

Miranda et al.

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[54] **SOLUBILITY PARAMETER BASED DRUG DELIVERY SYSTEM AND METHOD FOR ALTERING DRUG SATURATION CONCENTRATION**

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[*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: **08/907,906**

[22] Filed: **Aug. 11, 1997**

Related U.S. Application Data

[62] Continuation of application No. 08/178,558, Jan. 7, 1994, Pat. No. 5,656,286, which is a continuation-in-part of application No. 07/722,342, Jun. 27, 1991, which is a continuation-in-part of application No. 07/671,709, filed as application No. PCT/US90/01750, Mar. 28, 1990, which is a continuation-in-part of application No. 07/295,847, Jan. 11, 1989, Pat. No. 4,994,267, which is a continuation-in-part of application No. 07/164,482, Mar. 4, 1988, Pat. No. 4,814, 168.

[51] **Int. Cl.^{7}** **A61F 13/02**

[52] **U.S. Cl.** **424/449**; 424/448

[58] **Field of Search** 424/448, 449

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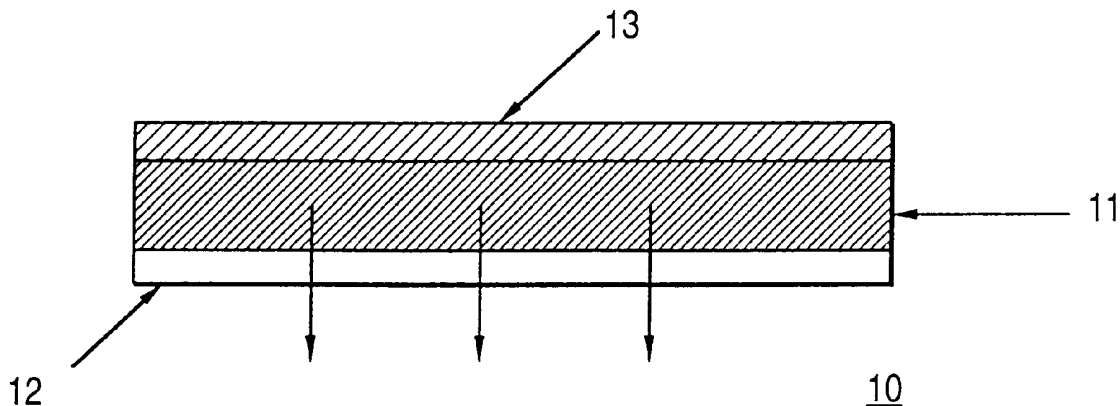
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Primary Examiner—Jyothsna Venkat
Attorney, Agent, or Firm—Foley & Lardner

[57] **ABSTRACT**

A blend of at least two polymers, or at least one polymer and a soluble polyvinylpyrrolidone, in combination with a drug provides a pressure-sensitive adhesive composition for a transdermal drug delivery system in which the drug is delivered from the pressure-sensitive adhesive composition and through dermis when the pressure-sensitive adhesive composition is in contact with human skin. According to the invention, soluble polyvinylpyrrolidone can be used to prevent crystallization of the drug, without affecting the rate of drug delivery from the pressure-sensitive adhesive composition.

66 Claims, 19 Drawing Sheets

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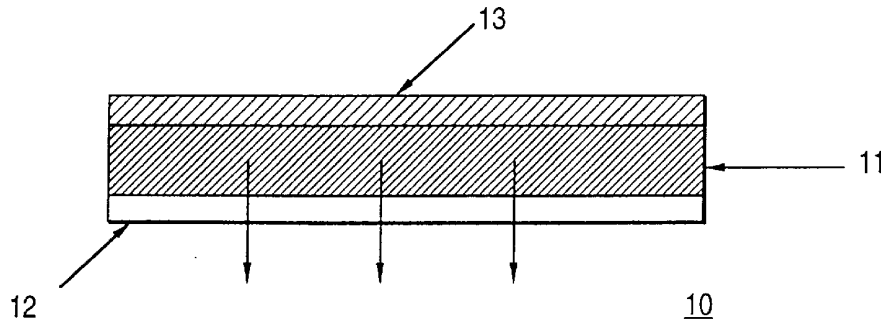English translation of WO 93/08795 (PCT/EP92/02478).

FIG. 1

FIG. 2

FIG. 3

FLUX (μg/cm^2/hr)

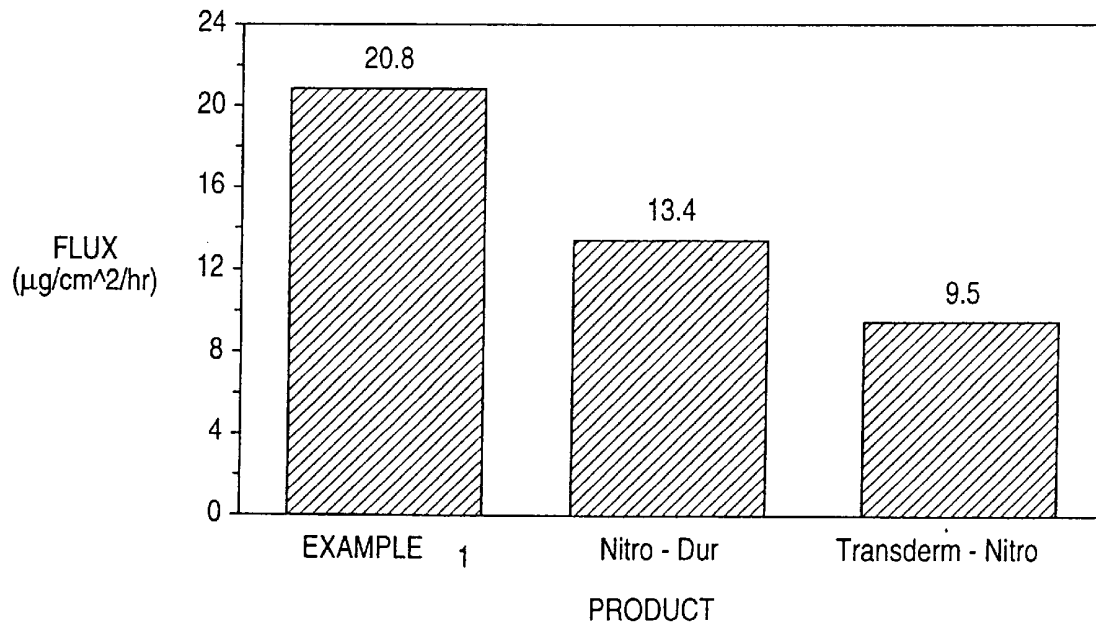| ADHESIVE COMPOSITION	FLUX
ACR EXAMPLE 2	12.5
ACR/EVA * EXAMPLE 3	16.0
ACR/PIB * EXAMPLE 4	25.4
ACR/SI * EXAMPLE 5	26.2

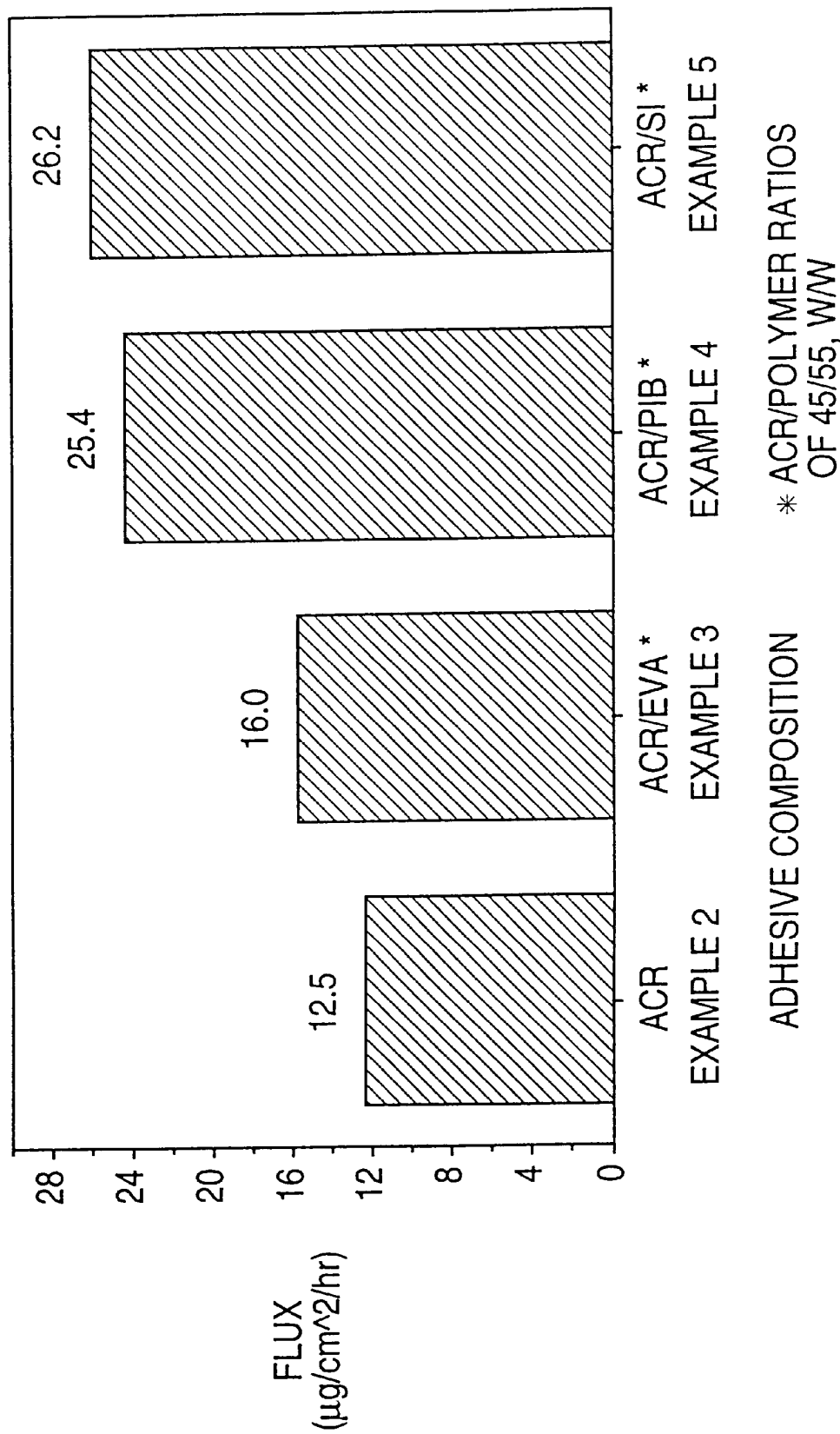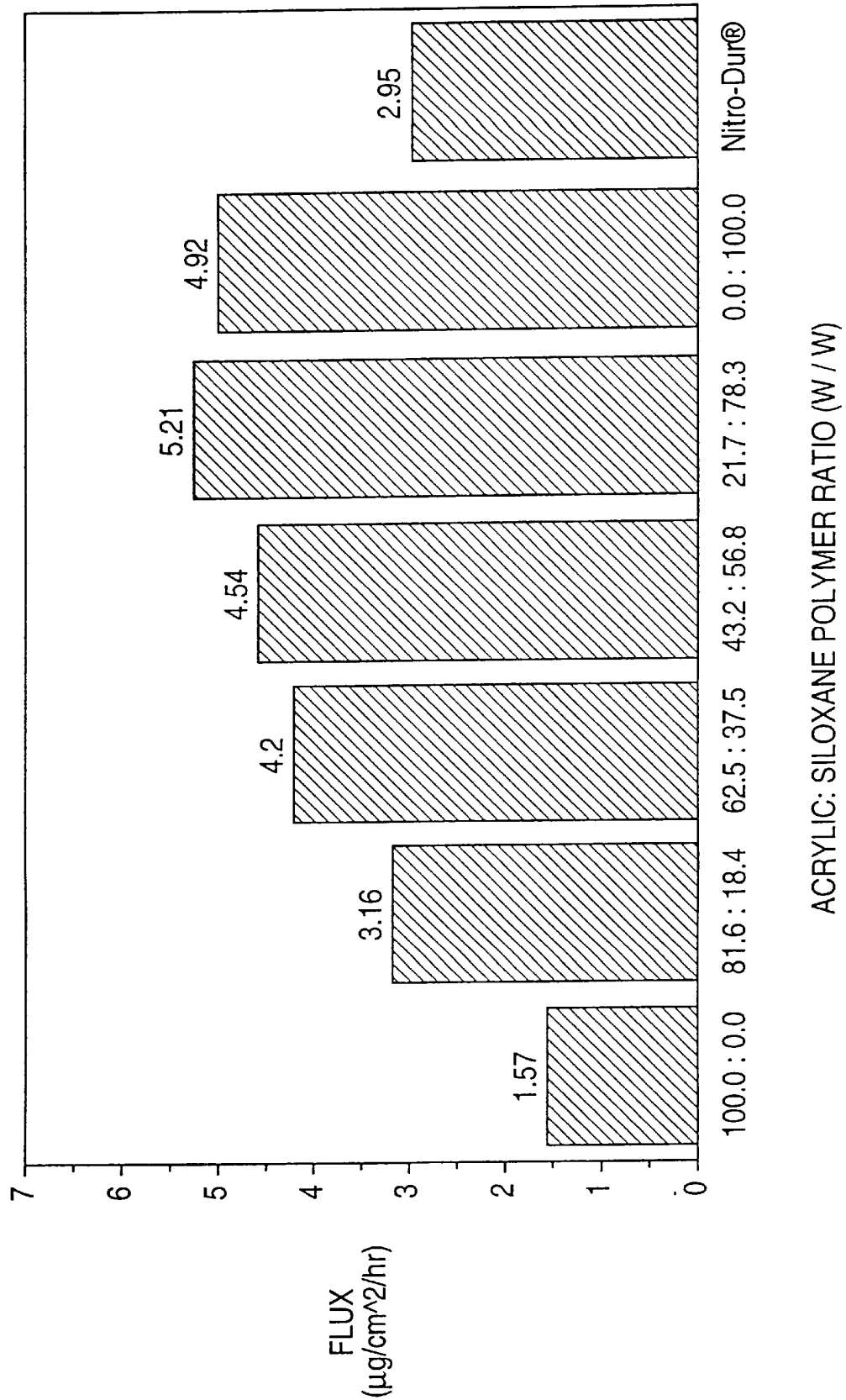* ACR/POLYMER RATIOS OF 45/55, W/W

FIG. 4

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