



NDA 19-123/S-024

Upsher-Smith Laboratories, Inc.  
Attention: Ms. Tanya Carone  
6701 Evenstad Drive  
Maple Grove, MN 55369

Dear Ms. Carone:

Please refer to your electronic supplemental new drug application dated October 14, 2005, received October 18, 2005, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act for Klor-Con® (potassium chloride) Extended-release 8 & 10 mEq Tablets, USP.

This "Changes Being Effected" supplemental new drug application provides for revised labeling to incorporate changes that Novartis Pharmaceuticals Corporation has made to the labeling of their innovator drug, NDA 17-476, Slow-K (potassium chloride) Extended-release Tablets, as follows:

1. Under the DESCRIPTION section:
  - a. The first paragraph was changed from:

Klor-Con® Extended-release Tablets, USP are a solid oral dosage form of potassium chloride. Each contains 600 mg or 750 mg of potassium equivalent to 8 mEq or 10 mEq of potassium in a wax-matrix tablet. This formulation is intended to slow the release of potassium so that the likelihood of a high, localized concentration of potassium chloride within the gastrointestinal tract is reduced.

To:

Klor-Con® Extended-release Tablets, USP are a solid oral dosage form of potassium chloride. Each contains 600 mg or 750 mg of potassium equivalent to 8 mEq or 10 mEq of potassium in a wax-matrix tablet. This formulation is intended to provide an extended-release of potassium from the matrix to minimize the likelihood of producing high, localized concentrations of potassium within the gastrointestinal tract.

- b. The second paragraph, third sentence was changed from:

Potassium chloride, USP occurs as a white, granular powder or as colorless crystals.

To:

Potassium chloride, USP is a white, granular powder or colorless crystals.

- c. The statement, “The tablets are imprinted using a pharmaceutical ink.” was added at the end of the Inactive Ingredients subsection.

2. Under the CLINICAL PHARMACOLOGY section:

- a. The fourth paragraph, the second sentence was changed from:

Such depletion usually develops as a consequence of therapy with diuretics, primary or secondary hyperaldosteronism, diabetic ketoacidosis, or inadequate replacement of potassium in patients on prolonged parenteral nutrition.

To:

Such depletion usually develops slowly as a consequence of prolonged therapy with oral diuretics, primary or secondary hyperaldosteronism, diabetic ketoacidosis, severe diarrhea, or inadequate replacement of potassium in patients on prolonged parenteral nutrition.

- b. The following text was added at the end of the section:

The potassium chloride in Klor-Con® Extended-release Tablets is completely absorbed before it leaves the small intestine. The wax matrix is not absorbed and is excreted in the feces; in some instance the empty matrices may be noticeable in the stool. When the bioavailability of the potassium ion from the Klor-Con® Extended-release Tablets is compared to that of a true solution the extent of absorption is similar.

The extended-release properties of Klor-Con® Extended-release Tablets are demonstrated by the finding that a significant increase in time is required for renal excretion of the first 50% of the Klor-Con® Extended-release Tablets dose as compared to the solution.

Increased urinary potassium excretion is first observed 1 hour after administration of Klor-Con® Extended-release Tablets, reaches a peak at 4 hours, and extends up to 8 hours. Mean daily steady-state plasma levels of potassium following daily administration of Klor-Con® Extended-release Tablets cannot be distinguished from those following administration of potassium chloride solution or (note: the word “or” was omitted from Upsher-Smith’s package insert) from control plasma levels of potassium ion.

3. Under the INDICATIONS AND USAGE section:

- a. The all capitalized usage statement at the beginning of this section was bolded, and the word “liquids” was changed to “liquid.”
- b. The first indication, first sentence, the phrase “For the treatment” was changed to “For the therapeutic use.”

4. Under WARNINGS, Hyperkalemia, a paragraph break was added following the sentence, “Potentially fatal hyperkalemia can develop rapidly and be asymptomatic.”

5. Under PRECAUTIONS, Information for Patients, the statement “To take each dose without crushing, chewing or sucking the tablets” was moved to the end of the list of precautionary statements.
6. Under PRECAUTIONS, Nursing Mothers, the statement “It is not known if Klor-Con® Extended-release Tablets have an effect on this content.” was added.
7. Under ADVERSE REACTIONS, the statement “Skin rash has been reported rarely.” was added.
8. Under DOSAGE AND ADMINISTRATION, the statements “Note: Klor-Con® Extended-release Tablets must be swallowed whole. Take each dose without crushing, chewing or sucking the tablets” was bolded and changed to read “**Note: Klor-Con® Extended-release Tablets must be swallowed whole and never crushed, chewed, or sucked.**”
9. The material number and revised date were updated.

We have completed our review of this supplemental new drug application, and it is approved, effective on the date of this letter, for use as recommended in the electronic final printed labeling (FPL) submitted on October 14, 2005.

In addition, the word “or” in last sentence of the last paragraph of the Clinical Pharmacology section, as noted above, should be inserted at the time of the next printing or within 6 months.

If you issue a letter communicating important information about this drug product (i.e., a “Dear Health Care Professional” letter), we request that you submit a copy of the letter to this NDA and a copy to the following address:

MEDWATCH  
Food and Drug Administration  
WO 22, Room 4447  
10903 New Hampshire Avenue  
Silver Spring, MD 20993-0002

We remind you that you must comply with the requirements for an approved NDA set forth under 21 CFR 314.80 and 314.81.

If you have any questions, call Ms. Denise Hinton, Regulatory Project Manager, at (301) 796-1090.

Sincerely,

*{See appended electronic signature page}*

Norman Stockbridge, M.D., Ph.D.  
Director  
Division of Cardiovascular and Renal Products  
Office of Drug Evaluation I  
Center for Drug Evaluation and Research

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**This is a representation of an electronic record that was signed electronically and  
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/s/

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Norman Stockbridge  
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