

## Ampicillin Suspension

Currently there are no manufacturers marketing this form of ampicillin in Canada.<sup>1,2,3</sup>

### Alternatives:

- Amoxicillin suspension appears to be at least as effective as ampicillin suspension except for infections caused by *Salmonella* or *Shigella*.<sup>4</sup> These infections can be treated with alternate drugs (e.g. azithromycin, ciprofloxacin)<sup>5,6</sup> but ampicillin is the drug of choice if the organism is susceptible<sup>7</sup>. Amoxicillin is preferred for respiratory tract infections because it achieves higher serum and tissue concentrations.<sup>4</sup>
- If ampicillin suspension is considered the best option for the patient, refer caregiver to a compounding pharmacy

OR

- Prepare an extemporaneous suspension using the contents of ampicillin capsules and a vehicle such as Simple Syrup or Ora-Plus / Ora-Sweet. pH must be adjusted to within a range of 4.5 and 6 using a buffer such as sodium citrate because ampicillin is acid labile. This suspension should be stable for the usual course of treatment if refrigerated based on stability data for a similar formulation.<sup>8</sup> There are no published data on bioavailability.
  - Method: Empty capsules into a mortar and smooth out the powder. Add a small amount of vehicle and triturate to thick, smooth paste. Using geometric dilution, add vehicle up to final volume.<sup>9</sup> Check the pH (meter or strips) and add buffer as needed to bring the pH between 4.5 and 6.<sup>8</sup>
  - Auxiliary labels: Shake Well, Refrigerate, and Expiry Date - 14 days from date compounded (USP guidelines for water-containing formulations with no or limited stability information<sup>10</sup>).

### References:

1. Teva Canada Customer Service Tel: 1-800-268-4129. Contacted 15Feb12.
2. Apotex Inc. DISpedia Tel: 1-800-667-4708. Contacted 15Feb12.
3. Nu-Pharm Inc. Tel: 1-800267-1438. Contacted 15Feb12.

4. AHFS. Aminopenicillins General Statement.
5. Blondel-Hill E, Fryters S. Bugs & Drugs. 2006 Capital Health, Edmonton AB.
6. Anti-infective Review Panel. Anti-infective guidelines for community-acquired infections. Toronto: MUMS Guideline Clearinghouse; 2012.
7. Personal communication Feb. 28, 2012. Dr. Yvonne Shevchuk, BSP, PharmD, Faculty of College of Pharmacy and Nutrition, University of Saskatchewan.
8. Brown GC, Kayes JB. The stability of suspensions prepared extemporaneously from solid dosage forms. Journal of Clinical Pharmacy 1976;1:29-37.
9. Paddock Laboratories Inc. General Directions For Compounding ORA-SWEET/ORA-PLUS Suspensions. Available at <http://www.stobec.com/documents/data/8196.pdf>. Accessed 20 Feb12.
9. Pharmaceutical Compounding – Nonsterile Preparations. U.S. Pharmacopeia. Available at [http://www.pharmacopeia.cn/v29240/usp29nf24s0\\_c795.html](http://www.pharmacopeia.cn/v29240/usp29nf24s0_c795.html). Accessed Feb 24, 2012.