

# Can all Medications be Compounded?

*Drs. Foster & Smith Educational Staff*

While many prescriptions are available in alternative forms, there are limitations due to the unique properties of some compounds. Those limitations include a medication's stability, solubility, palatability, absorption, and legality. Our pharmacy will only custom compound medications in forms that will be safe and effective for companion animals.

## **Stability**

A medication is only useful if its ingredients are stable and effective. Depending upon the dosage form an active ingredient may not remain stable for the same length of time. For example, certain antibiotics may be stable for one year as a tablet or capsule, but may degrade and become ineffective after only fourteen days as a suspension.

Another factor that can affect stability is the interaction between active ingredients. A compounded dosage form's active ingredients may interact adversely with other ingredients, making that compounded dosage form unstable.

## **Solubility**

Solubility is an ingredient's ability to dissolve completely in a liquid. Some medications are very soluble allowing a large amount of the active ingredient powder to dissolve in a very small amount of liquid. Products of this nature can be easily formulated into a concentrated solution that can then be flavored to make the final preparation more palatable. Some medications are so insoluble that the medication would not be suitable for compounding into a liquid form. If, however, the active ingredient is stable in liquid, it can be compounded into a suspension instead of a solution. In a suspension, the medication is first coated, preventing the active ingredient from sticking together, then incorporated into the suspension. This process also aids in the even dispersion of the active ingredient throughout the entire volume making accurate doses of the medicated suspension.



## **Palatability**

Some medications are so bitter or metallic tasting that flavoring cannot cover the flavor. Even though they may be suitable for any oral dosage form such as a tablet, they would be difficult to administer due to the taste. In this case, the medication could be incorporated into a hard gelatin capsule to prevent oral contact with the active ingredient.



## **Absorption**

For pet owners that have difficulty given oral medications, transdermal gels offer a viable option. There are, however, limits on what medications can be administered transdermally depending upon their molecular size, solubility, and other chemical attributes.

## **Legality**

Legal limitations exist that prohibit the compounding of certain medications. In most of these cases, the limitations are due to patents held by pharmaceutical manufacturers that prevent the use of the active ingredient or prevent the compounding of that particular medication in patented dosages or strengths.

*Drs. Foster & Smith Pet Pharmacy will only compound prescription medications on a per order basis in forms that are safe and effective for companion pets. Drs. Foster & Smith is not a manufacturer of prescription medications.*