



## Treatment solutions for poultry producers

By Dr. Tom W. Smith  
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MISSISSIPPI STATE, Miss. - The following solutions have been used as supportive treatments by poultry and game bird producers. They are intended as aids in treating the described conditions, not as a replacement for any management, drug or antibiotic therapy.

**Aspirin solution.** Used as a general treatment for reducing distress conditions of birds (fever or listlessness) that accompany many diseases.

*Dissolve five (5 grain) aspirin tablets in 1 gallon of water.*

Offer this solution free-choice to the birds

for the duration of an illness. The solution aspirin is equivalent to 25 grains/gallon or 324 mg/gallon of drink water. The dosage rate is about 25 mg/lb. body weight per day.

# UNI-SOL™

### Questions Commonly Asked About UNI-SOL™

• **Competitive aspirin products claim to contain varying potencies. How do these potencies compare to UNI-SOL™ ?**

No product on the market today conveniently achieves the same level of active ingredient in the finished drinking water solution as UNI-SOL™. The amount of active ingredient in UNI-SOL™ is labeled at 14,375 milligrams or 14.375 grams per ounce. Multiplying this by 32 ounces per quart gives a total of 460 grams or over 1 pound of active ingredient in each quart, or 48.6%.

“Asprisol”, a competitive liquid-based product contains acetylsalicylic acid in an alcohol base. Although the potency of the active ingredient is not stated on the label, it has been reported to be 10%. At best, the Merck Index documents aspirin’s solubility in alcohol at 1 gram in 5ml, or only 20%.

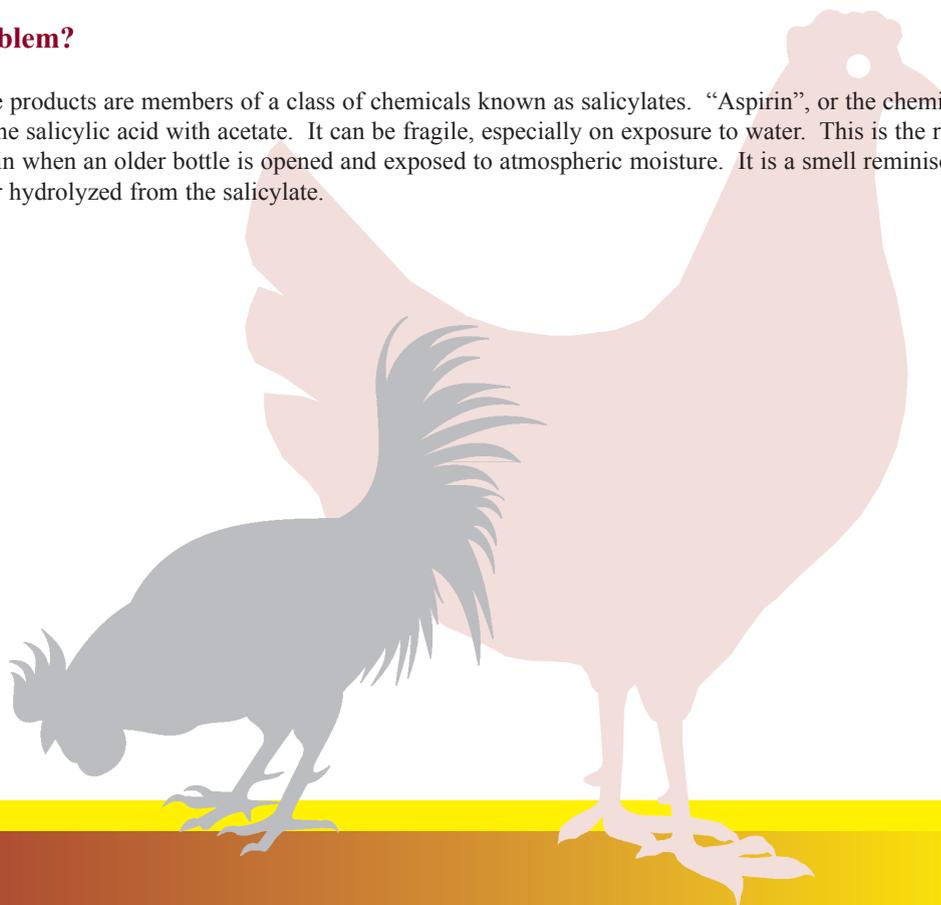
Aspirin powders are also available from a variety of distributors. Care must be taken when comparing potencies because the products do vary greatly. The lowest reported potency is WYNCO’s dry powdered aspirin at 19.5%, which is marketed as “256 grains” in an 85 gram pack. It is important to note the use of the unit of measure “grain”, which is converted to grams by multiplying by 0.0648 (reference The Merck Index eleventh edition, page 121). In this case 256 grains equals only 16.59 grams of aspirin per pack.

**Amount And Cost Of The Various Products Needed To Supply Dr. Smith's Recommendation of 25 Mg Per Pound Of Bodyweight Daily**

	 <b>UNI-SOL™</b>	<b>Walco Asprisol Liquid Asprin</b>	<b>WYNCO Dry Powdered Aspirin</b>
<b>Potency/packaging</b>	14,375 milligrams per fluid ounce	5,912 milligrams per fluid ounce	16,590 milligrams per 85 gram pack
<b>Recommended milligrams of active ingredient per 1000 lbs bodyweight</b>	25,000	25,000	25,000
<b>Amount of product and approximate cost for each 1000 lbs bodyweight daily</b>	1.74 fluid ounces @ \$6.00/qt = \$0.33	4.23 fluid ounces @ \$4.50/qt = \$0.59	1.51 packages @ \$1.50/pk = \$2.26

**• Can product stability be a problem?**

Under some circumstances. All of these products are members of a class of chemicals known as salicylates. “Aspirin”, or the chemical acetylsalicylic acid is a combination of the salicylic acid with acetate. It can be fragile, especially on exposure to water. This is the reason for the familiar smell of household aspirin when an older bottle is opened and exposed to atmospheric moisture. It is a smell reminiscent of vinegar or acetic acid which is split or hydrolyzed from the salicylate.



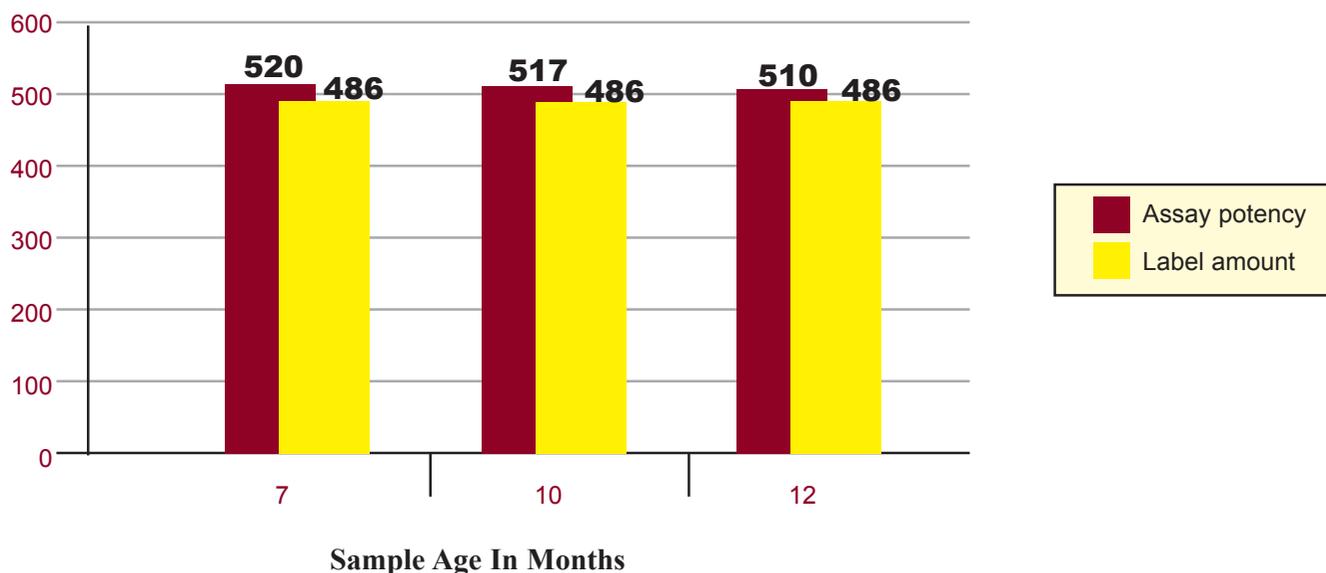
- **While some claim hydrolysis of acetylsalicylic acid takes seven days, the truth is that it can occur instantaneously if the water contains high concentrations of mineral elements or electrolytes.**

There are other members of the family of salicylates which, like acetylsalicylic acid, are salicylate salts. An example of a well-known one is bacitracin methylene disalicylate. Although more complex to manufacture than aspirin, some salicylate salts have the advantage of being more soluble than aspirin in water, and also very stable under the proper conditions. This stability is clearly demonstrated by the accompanying report of a shelf-life study on UNI-SOL™ which shows the active ingredients to maintain its label potency for over 12 months when stored in warehouse conditions. No other liquid salicylate supplier has been in the market long enough to generate prolonged stability data. Note that UNI-SOL™ bears expiration dating of one year from manufacture (sprayed in red ink on the shoulder of each bottle). It is extremely stable. That is why UNI-SOL™ will never smell like vinegar.

UNI-SOL™ is subjected to testing by third-party laboratories to determine the content of active ingredient upon manufacturing. The minimum amount of active ingredient at the time the product is packaged meets or exceeds the label potency of 486mg per ml, which is equal to 1.01lb of active ingredient in each quart.

In addition to initial potency verification tests, retained samples have been subjected to typical warehouse storage conditions in ambient temperatures to verify stability. The chart below summarizes some of the results of this testing, and demonstrates that the active ingredient meets the label potency past the one year expiration dating.

**Sample Potency Compared To Label Amount**  
(Milligrams Of Active Ingredient Per Ml)



- **How do sodium salicylate and acetylsalicylic acid compare in their ability to perform their intended role?**

There are a number of publications that address the ability of the family of salicylates to live up to their claim. The handiest is The Merck Index or The Merck Veterinary Manual which list several salicylate salts and their therapeutic categories.