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(54) Title: TOPICAL COMPOSITIONS COMPRISING FIPRONIL AND PERMETHRIN AND METHODS OF USE

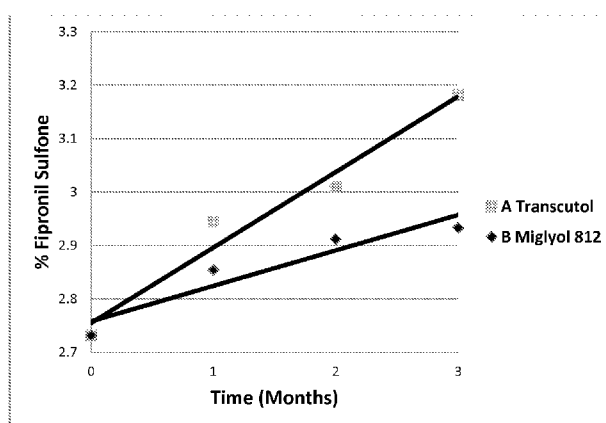


Figure 1

(57) Abstract: The subject matter disclosed herein is directed to stable, highly-effective topical formulations comprising permethrin, fipronil and a solvent system that is sufficient to solubilize these two active ingredients and limit degradation of fipronil to its sulfone, and their uses in topical applications on animals and the environment. Useful formulations comprise from about 30 % to about 55 % (w/w) permethrin and about 2 to 15 % (w/w) fipronil and a solvent system that comprises N-methyl pyrrolidone and a glycol, glycol ether, glycol ester, fatty acid ester or neutral oil, wherein the N-methyl pyrrolidone and glycol, glycol ether, glycol ester, fatty acid ester or neutral oil are present in a weight : weight ratio of from about 1 :2.0 to about 1 :3.5, glycol, glycol ether, glycol ester, fatty acid ester or neutral oil to n-methyl pyrrolidone. These two actives when combined in the described amounts have been found to have unexpected enhanced repellent activity against stable fly. However, it is the formulations described herein that provide solvency and stability that maintain synergistic concentrations after application on an animal.