

EFFICACY REVIEW

DATE: IN 4-25-91 OUT 7-3-91

FILE OR REG. NO. 4822-GAA

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED April 9, 1991

DATE OF SUBMISSION November 5, 1990

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): (I, D, H, F, N, R, S) Repellent

DATA ACCESSION NO(S). 418442-02; D163887; S395038; Case#015493; Action Code:160

PRODUCT MGR. NO. 17-Hutton/Tavano

PRODUCT NAME(S) OFF! Insect Repellent Formula 1990 #1

COMPANY NAME S. C. Johnson & Son, Incorporated

SUBMISSION PURPOSE Provide performance data to support claims for 2-hour protection against mosquitoes, black flies and sand flies with new low-Deet formulation.

CHEMICAL & FORMULATION N,N-Diethyl-meta-toluanide 6.65%

Other isomers 0.35%

(non-aqueous, pressurized ready-to-use liquid, 6 fl. oz)

CONCLUSIONS & RECOMMENDATIONS The data presented in EPA Accession (MRID) Number 418442-02, having been obtained from laboratory and field testing conducted according to protocols which meet essential requirements of § 95-9 on pp. 262-4 and especially § 95-9(a)(1)-(3) on p. 263 and the standards for § 95-9(b)(1)(iv) and (v) on p. 264 of the Product Performance Guidelines are adequate to support the claims for repellency against mosquitoes and biting flies for up to 2 hours when the subject product is applied to human skin according to label directions. Test No. 1 demonstrates laboratory efficacy of the subject formulation applied as an aerosol against yellow fever mosquito and stable fly, as well as equivalency to a 7.5% lotion applied at the same amount of deet per unit area. Tests 2 & 3 demonstrate effectiveness of the subject aerosol against these 2 species equivalent to other deet aerosols of lower and higher concentration in laboratory tests. Tests 4 & 6 demonstrate field efficacy of the subject aerosol against *Aedes vexans* in Wisconsin and *A. taeniorhynchus* in Florida compared to a 7.5% lotion (which also contains R-11 at 1%) applied at the same unit-area rate; tests 7 & 8 demonstrate field repellency of the subject aerosol against *Aedes* in the same 2 locations compared to a 5% aerosol; test 5 demonstrates field repellency of the subject aerosol against *Aedes* in Wisconsin compared to a 3% aerosol and test 9 compares field repellency of the subject aerosol and a 15% deet liquid against *Aedes* in Maine. Test 10 demonstrates field repellency of the subject aerosol against black flies in Maine compared to a 7.5% deet-only lotion applied at the same unit-area rate. Test 11 demonstrates field repellency of the subject aerosol against sand flies in Georgia compared to the same lotion at the same rate. Incidentally, the label declaration for other isomers should be 0.35% (5% of 7.00%).

RL Vern L. McFarland, IRB