

UNITED STATES PATENT OFFICE.

ALFRED S. BURDICK AND ELMER B. VLIET, OF CHICAGO, ILLINOIS, ASSIGNORS TO THE ABBOTT LABORATORIES, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BENZYL ESTER OF ACETYL SALICYLIC ACID.

No Drawing.

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To all whom it may concern:

Be it known that we, ALFRED S. BURDICK and ELMER B. VLIET, both citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Benzyl Ester of Acetyl Salicylic Acid, of which the following is a specification.

10 The object of our invention is to provide an improved compound for internal medication, which shall have pronounced anti-spasmodic properties in addition to the well-known medicinal qualities possessed by
15 aspirin, i. e. acetylsalicylic acid.

Preparation.—Benzyl salicylate (1 mol.) is mixed with acetic anhydride ($1\frac{1}{2}$ mol.) and anhydrous sodium acetate ($\frac{1}{2}$ mol.) and heated in an oil bath at 140° C. for 2 hours.
20 Upon cooling, the solution solidifies. This is brought into solution by triturating with benzene and water. The benzene solution is dried and distilled. The fraction distilling between 170 – 200° C. at 5 mm. pressure is
25 collected. Upon long standing in an ice bath this solidifies and pure benzyl acetylsalicylate is obtained from this by several

crystallizations from a mixture of petroleum ether and carbon tetrachloride.

Properties.—The benzyl ester of acetyl- 30 salicylic acid is a white solid melting at 25.5 – 26° C., which upon melting gives a straw colored, rather viscous liquid which has an index of refraction of $n_{\frac{25}{D}} 1.5540$. 35

Analysis.

0.1347 gms. substance—0.3505 gms. CO_2 ,
0.0644 gms. H_2O .

$\text{C}_{16}\text{H}_{14}\text{O}_4$ Theory:—C71.08% H5.22% 40
Found:— 70.96% 5.35%

Benzyl acetylsalicylate is very soluble in carbon tetrachloride, benzene, xylene, ethyl acetate and acetone but is only slightly solu- 45 ble in petroleum ether.

Clinical tests indicate that this compound is an efficient anti-spasmodic in addition to having well-known desirable medicinal properties of acetylsalicylic acid. 50

We claim as our invention:

The benzyl ester of acetylsalicylic acid.
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