# การดัดแปรและการทำให้ชันสนบริสุทธิ์

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# MODIFICATION AND PURIFICATION OF ROSIN

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ในงานวิจัยนี้ได้ทำการดัดแปรและการทำชันสนให้บริสุทธิ์โดยใช้ 2 กระบวนการ ดีไฮโดรจีเนชัน (ดิสพรอพอชันเนชัน) และไฮโดรจีเนชัน กระบวนการดีไฮโดรจีเนชัน กระทำโดยใช้ 0.3%Pd/C เป็นตัวเร่งปฏิกิริยาที่อุณหภูมิระหว่าง 240—280°C เป็นเวลา 4 ชั่วโมง ภายใต้บรรยากาศของไนโตรเจน ชันสนที่ผ่านกระบวนการดีไฮโดรจีเนชันทำให้บริสุทธิ์โดยการกลั่นลดความดันที่ 3 mmHg และตกผลึกโดยใช้ตัวทำละลายที่เหมาะสม ผลิตภัณฑ์ที่ได้ประกอบด้วยกรดดีไฮโดรอะบีติก 97 เปอร์เซ็นต์ ที่มีจุดหลอมเหลว 160°C

ไฮโดรจีเนชัน กระทำโดยใช้เรนีนิคเกิลเป็นตัวเร่งปฏิกิริยาที่สภาวะที่เหมาะสมคือ อุณหภูมิ 200°C ภายใต้ความดันไฮโดรเจน 700 psi และปริมาณตัวเร่งปฏิกิริยา 10% โดยน้ำหนักของชันสนเป็นเวลา 12 ชั่วโมง ในตัวทำละลายเอธานอล ผลิตภัณฑ์ที่ได้นำไปทำการกลั่นลดความดันที่ 3 mmHg ได้ผลิตภัณฑ์กรดเททระไฮโดรอะบีติก 81.23 เปอร์เซ็นต์

ภาควิชา สหสาขาวิชาปิโตรเคมี—พอลิเมอร์ ลายมือชื่อนิสิต .....

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The aim of this research was to modify and purify rosin by dehydrogenation (disproportionation), and hydrogenation reactions. Dehydrogenation was to operate in a temperature range of 240–280°C under nitrogen atmosphere and concentration of Pd/C catalyst 0.3% by weight of rosin for 4 hours. Dehydrogenated rosin was distilled under reduced pressure of 3 mmHg in an atmosphere of nitrogen to obtain 87% yield of purified rosin. The purified rosin was crystallized from acetone to obtain 97% of dehydroabietic acid having a melting point 160°C.

Hydrogenation was to operate at optimum condition using Raney Nickel catalyst at 200°C, 12 hours, 700 psi, 10% catalyst concentration by weight of rosin and in ethanol. Hydrogenated rosin was distilled under reduced pressure of 3 mmHg to give pure hydrogenated rosin (86.23%).

ภาควิชา สหสาขาวิชาปิโตรเคมี–พอลิเมอร์ ลายมือชื่อนิสิต .....
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