

**ABSTRACT**

Provided is a method for producing a lubricant base oil, the method including a first hydrogenation treatment step of bringing a hydrogenation treatment catalyst and a light wax into contact with each other at temperature  $T_1$ , and thereby obtaining a first treated oil; a second hydrogenation treatment step of bringing the hydrogenation treatment catalyst and a heavy wax into contact with each other at temperature  $T_2$ , and thereby obtaining a second treated oil; and a base oil production step of obtaining a lubricant base oil from a feedstock oil containing at least one selected from the group consisting of the first treated oil and the second treated oil, in which the hydrogenation treatment catalyst is a catalyst obtained by supporting one or more metals selected from the elements of Group 6, Group 8, Group 9, and Group 10 of the Periodic Table of Elements, on an inorganic oxide support in which the amount of all acid sites  $A_1$  measured by an ammonia temperature programmed desorption method is 0.5 mmol/g or more, and the temperature  $T_2$  is a temperature higher than the temperature  $T_1$ .