[Summary of Invention]

[Technical Problem]

An object of the present invention is to selectively and stably obtain the A-form crystals of 2-(3-cyano-4-isobutyloxyphenyl)-4-methyl-5-thiazolecarboxylic acid under conditions suitable for commercial production.

[Solution to Problem]

The present disclosure relates to~~invention is~~ a process for producing A-form crystals of 2-(3-cyano-4-isobutyloxyphenyl)-4-methyl-5-thiazolecarboxylic acid, comprising: a step of dissolving by heating 2-(3-cyano-4-isobutyloxyphenyl)-4-methyl-5-thiazolecarboxylic acid in one or a plurality of solvents as a good solvent, selected from the group consisting of 1-propanol, 2-propanol, ethanol, and acetone; a step of cooling the solution; and a step of adding to the solution a hydrocarbon solvent as a poor solvent.

That is, the present disclosure~~invention~~ is based on the finding that the A-form crystals can be obtained stably by using a lower alcohol solvent except methanol or acetone as the good solvent and by using a hydrocarbon solvent as the poor solvent.

In an aspect, there is provided a process for producing A-form crystals of 2-(3-cyano-4-isobutyloxyphenyl)-4-methyl-5-thiazolecarboxylic acid, comprising: dissolving by heating 2-(3-cyano-4-isobutyloxyphenyl)-4-methyl-5-thiazolecarboxylic acid in 1-propanol or 2-propanol; cooling the solution; and adding to the resulting solution heptane.

Here, the A-form crystals of 2-(3-cyano-4-isobutyloxyphenyl)-4-methyl-5-thiazolecarboxylic acid refer to a polymorph which shows an X-ray powder diffraction pattern having characteristic peaks at, when represented in terms of a reflection angle 2θ, about 6.62°, 7.18°, 12.80°, 13.26°, 16.48°, 19.58°, 21.92°, 22.68°, 25.84°, 26.70°, 29.16°, and 36.70°. One example of such X-ray powder diffraction patterns is shown in Figure 1 (the X-ray diffractometer used is different from the one used in PTL 1). Alternatively, in an infrared spectroscopic analysis, the A-form crystals may be expressed as a polymorph having a