What is claimed is

1. A sputtering target comprising an alloy of Al and Sc and containing from 25 at.% to 50 at.% of Sc, the sputtering target having an oxygen content of 2000 ppm by mass or less, and a variation in Vickers hardness (Hv) of 20% or less, wherein the variation in Vickers hardness (Hv) is calculated by measuring Vickers hardness at a plurality of measurement points on a target surface, determining an average value and standard deviation of measured values at the measurement points, dividing the standard deviation by the average value, and expressing in a percentage.

2. The sputtering target according to claim 1, wherein the oxygen content is 1000 ppm by mass or less.

3. The sputtering target according to claim 1 or 2, wherein the variation in Vickers hardness (Hv) is 5% or less.

4. The sputtering target according to any one of claims 1 to 3, wherein the sputtering target has a carbon content of 1000 ppm by mass or less.

5. The sputtering target according to any one of claims 1 to 4, wherein the sputtering target comprises at least one phase selected from the group consisting of an Al-Sc phase, an Al_2-Sc phase and an Al_3-Sc phase.

6. The sputtering target according to any one of claims 1 to 5, further containing at least one element selected from the group consisting of Li, Na, K, Fe, Co and Ni in a total amount of 0.1% by mass or less.

7. A method for producing a sputtering target, comprising:

a melting step of melting, in an inert gas or vacuum atmosphere, an Al raw material together with a Sc raw material having an oxygen content of 3000 ppm by mass or less and then cooling to obtain an Al-Sc alloy ingot containing from 25 at.% to 50 at.% of Sc by casting; and

a forging step of applying a pressure to the ingot to subject the ingot to plastic working.

8. The method for producing the sputtering target according to claim 7, wherein a Sc raw material having an oxygen content of from 100 ppm by mass to 3000 ppm by mass is used in the melting step.

9. The method for producing the sputtering target according to claim 7 or 8, wherein a working ratio of the plastic working in the forging step is from 50% to 95%.

10. The method for producing the sputtering target according to any one of claims 7 to 9, wherein in the forging step, the ingot is subjected to plastic working while heating the ingot at a temperature of from 500 °C to 1200 °C.