CLAIMS

1. A soft magnetic alloy for magnetic recording, comprising:
in at.%,
0.5 to 29.5% of one or more of A group elements;
0.0 to 29.5% of one or more of B group elements; and
the balance being Co, Fe, and unavoidable impurities,
wherein:
a ratio of Fe:Co is 10:90 to 70:30;
a total content of the A group elements and the B group elements is 10 to 30%;
a hydrogen content is less than 20 ppm;
the A group elements consist of Ta, Nb, and V; and
the B group elements consist of Cr, Mo, and W.

2. A soft magnetic alloy for magnetic recording, comprising:
in at.%,
0.5 to 29.5% of one or more of A group elements;
0.5 to 29.5% of one or more of B group elements; and
the balance being Co, Fe, and unavoidable impurities,
wherein:
a ratio of Fe:Co is 10:90 to 70:30;
a total content of the A group elements and the B group elements is 10 to 30%;
a hydrogen content is less than 20 ppm;
the A group elements consist of Ta, Nb, and V; and
the B group elements consist of Cr, Mo, and W.

3. The soft magnetic alloy for magnetic recording according to claim 1 or 2, further comprising one or more elements of elements described in the following C group elements, D group elements, E

group elements, and F group elements in a range of at.% described in each group:

the C group elements: one or more elements selected from Ti, Zr, and Hf, a total content thereof being less than 5%, a total content of the A group elements, the B group elements, and the C group elements being 10 to 30%;

the D group elements: one or two elements selected from Ni and Mn, a total content thereof being 30% or less;

the E group elements: one or two elements selected from Al and Cu, a total content thereof being 5% or less; and

the F group elements: one or more elements selected from Si, Ge, P, B, and C, a total content thereof being 10% or less.

4. A sputtering target material for forming a soft magnetic alloy for magnetic recording, the sputtering target material comprising the soft magnetic alloy for magnetic recording according to any one of claims 1 to 3.

5. A magnetic recording medium, comprising the soft magnetic alloy for magnetic recording according to any one of claims 1 to 3.