Scrap gold and refining: from scrap to pure gold

How many grams of pure gold are in my scrap, and how much comes back after refining?

1 Use it in 4 steps

1. Record each batch of scrap on its own line: a note, the karat and the weight. If a lab measured the purity, type it in parts per thousand (for example 870).
2. Type the refining loss and the refining fee per gram that you agreed with the refinery.
3. Type today's buying price for one gram of 24K from qintar.app/en/gold-price-today/.
4. Read the summary: pure gold, what comes back after the loss, the fee and the value. Delete the "Example" rows before you start.

2 The calculation

1. Pure gold = weight × karat purity (24K = 0.999, 21K = 0.875, 18K = 0.75), or weight × lab purity ÷ 1000.
2. Returned = pure gold × (1 – loss %). In grams of 24K = returned ÷ 0.999.
3. Value = grams of 24K × buying price – refining fee (pure gold × fee per gram).

3 Worked example Example

Refining loss % (example): 0.5% · Refining fee per gram of pure gold, EGP (example): 40.00 · Buying price, 1 g of 24K (example): 7,009.37

Note	Karat	Weight (g)	Lab purity, per thousand (if tested)	Pure gold (g)
Example 21K jewelry scrap	21	120.000		105.000
Example 18K scrap	18	45.500		34.125
Example rings tested at the lab	21	30.000	870	26.100

Result	Value
Total scrap weight	195.500
Total pure gold	165.225
Pure gold after the refining loss	164.399
Equals 24K (g)	164.563
Refining fee	6,609.00
Value at the 24K buying price, minus the fee	**1,146,877.03**

4 The table: fill it in by hand

Note	Karat	Weight (g)	Lab purity, per thousand (if tested)	Pure gold (g)

Prices and calculations are for information only. They are not financial advice, an offer to buy or sell, or a religious ruling. Check tax matters with your accountant.

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