

# KB160827478: i-cut Automate - Can I see the numeric percentage of material fill and waste for the substrate

## Question

Can I see the numeric percentage of material fill and waste for my substrate?

## Definitions

The **Waste** is everything that is outside of the cut paths on a nested layout, what remains on the table after taking out all the finished jobs (inside the margins though, the margins are not counted as waste).

The **Yield** is the opposite, it is the sum of all surfaces inside all cut paths, everything that is used from the substrate.

## Answer

The material waste and fill (which is, yield) is visible in the PDF and XML reports that can be generated by the output workflow (which includes the **Export to nested layout** task) from the Gang Run Printing queue.

Example xml: [SampleNesting XML report\\_115gr\\_LAYOUT.xml](#)

- In the PDF layout report:
  - **Yield** and waste are expressed as a percentage, e.g.: 70% yield and 30% waste.
- In the XML report:
  - **Waste** is not included in the XML file.
  - **Yield** in square mm is available as attribute and can be extracted via XPath. This value can be expressed in [scientific notation](#).

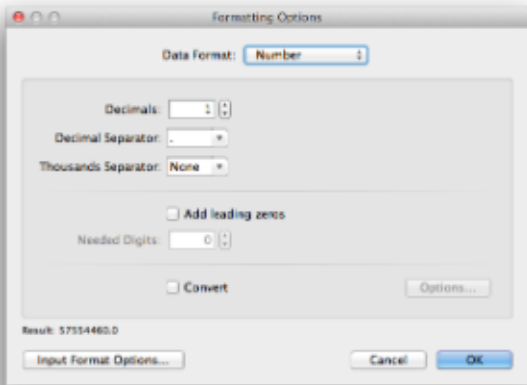
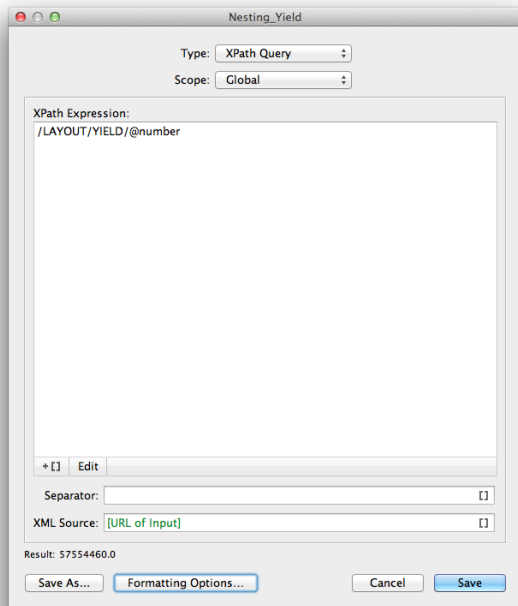
## XPath calculations to use waste information for ERP feedback

Use numerical formatting in the XPath SmartName for yield to convert the scientific notation to conventional notation, so, it can be used in calculations.

Article information	
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Use **Width** and **Height** in combination with **Yield** to calculate the waste percentage.

Nesting\_Waste-percentage

Type: XPath Query

Scope: Global

XPath Expression:  
100 \* (1- [Nesting\_Yield] div (/LAYOUT/WIDTH/text0 \* /LAYOUT/HEIGHT/text0))

+ [] Edit

Separator: []

XML Source: [URL of Input] []

Result: 14,2

Save As... Formatting Options... Cancel Save