This dataset contains two types of spreadsheets referred to as **Batch** and **Fail**

The **Batch** spreadsheets contain each batch produced by the site, expected yield and actual yield, as well as estimated cost of scrap in **$.**
This covers all departments.

Data Batch: This spreadsheet contains all batches poured this year, their expected yield and actual yield which is what feeds into the top 6 tracking performed on site every week. The extract being used should only contain **plate data (not bottles,** etc).
It contains each batch produced by the site, expected yield and actual yield as well as estimated cost of scrap in **$**. It does not include the production vessel or pouring line data found in the fails data.

Product code	Batch ID Number	Manufacture Date	Theoretical Yield	G.R.Qty Grain (measure) (gr), a unit of mass.	Total Input in ML (ML = millilitre)	QC Qty (ML) (ML = milliliter)	Theoretical Yield(ML) (ML = milliliter)	G.R.Qty(ML)	Waste in ML	% Waste loss	Waste Total Cost
JM1441K	6885243	5/1/2024	1865.131	1712	337163.49	1440	335723.58	308160	27563.58	8.2	429.99
JM1441K	3819574	5/1/2024	1865.131	1695	337163.49	1440	335723.58	305100	30623.58	9.1	477.73

The dataset covers every batch poured in a year, whether it failed or not. It states the theoretical yield and the input both in **ml**, quantity taken for quality samples and what was received, calculating the amount of waste for each batch.

The **Fails** spreadsheet contains the data on all of the Quality Control and in-production fails (defined as a 100% loss or scrap). It also includes the production vessel and pouring line as well as other data, such as the expected yield of the batch.

Type of Fail	Product code	Internal Fail Date (SAP UD Date)	SAP Fail Category / Description	Sub Category - Fails	Date of Manufacture	Week of Manufacture	Line	Vessel	Order Quantity (Expected Yield)
In-Production	SA3806L	11-Jan-24	Equipment	Equipment Issues	10-Jan-23	2	Yellow	341	138
QC	JQ3415R	30-Nov-23	PH	Ph Out of Spec	13-Sep-23	37	FMB	1123	68

Considering the right-hand columns (shown in grey) of the Batch data in more detail

Theoretical Yield A	G.R.Qty B	Total Input in ML C	QC Qty (ML) D	Theoretical Yield(ML) E	G.R.Qty(ML) F	Waste in ML G	% Waste loss H	Waste Total Cost I
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The theoretical yield without a unit will be the number of packs of plates theoretically expected from the batch size based on the amount of liquid and powders used. There are 10 plates in a pack. So in total this would be 15889.54 plates theoretically provided by this batch. (A * 10)

- G.R.Qty is the amount of packs that was actually produced during this run (actual yield), so the % waste loss can be calculated from these two values.
- Total input in ML is the total quantity of product put into the start of the process.
- QC Qty is the total product reserved for quality tests for the batch.
- So the Theoretical Yield (ML) should be the Total Input in ML minus QC Qty (ML) (E = C - D). Not sure why there's a tiny discrepancy here, could just be a rounding error that has carried through.
- G.R.Qty (ML) is the actual yield of the batch in ml.
- Waste in ML is the total amount of product that did not make it through the process (G = E - F)
- % Waste loss H = (G / F) * 100 OR H = (B / A) * 100
- Waste total cost is the cost of the scrap material to the company, normally in $

Notes

- The products are poured in different sizes, so some plates have a 17ml fill, some are 26ml and there are a couple of products that are 23ml fills. So the fill volume of each batch could calculated by doing E / (A*10).

- The 17ml fill and 23/26ml fills are done by different recipes on the machine, it is not known if there is any correlation between a standard and deep fill and the amount of scrap produced.

- In theory the expected yield in the Fail Data is the expected yield in packs (so equivalent to A in the scrap data).