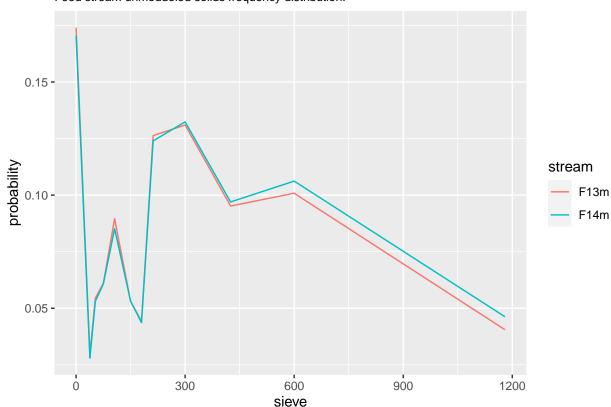
## Results and Discussion

Each test's feed stream PSD results were first compared to confirm that their distributions were simmilar to allow for comparitive statictics.



Feed stream unmoddeled solids frequency distribution.

The two most commmonly used distributions in Geology and Mineral Processing and specifically comminution circuits are the Roslin-Rammler and the Gates-Gaudin-Schumann distributions.

Both models were used to model all PSD screening data to, and the subsequent best fit model was selected in each case. Model selection was determined by comparing each PSD's transformed linear model's determinant  $(R^2)$ . Interpolation between measured sizing points is conducted by the back-transformation of the model-fitted points along the respective model's distribution function.

| Table | 1: | RR | Model | (formula) | j |
|-------|----|----|-------|-----------|---|
|       |    |    |       |           |   |

| stream | r.square | dadj.r.squap | rexdalue | AIC   |  |  |  |
|--------|----------|--------------|----------|-------|--|--|--|
| F13m   | 0.996    | 0.995        | 0        | -26.0 |  |  |  |
| F14m   | 0.996    | 0.995        | 0        | -25.7 |  |  |  |
| OS13m  | 0.935    | 0.928        | 0        | 11.2  |  |  |  |
| OS14m  | 0.919    | 0.910        | 0        | 14.2  |  |  |  |
| US13m  | 0.972    | 0.968        | 0        | 0.8   |  |  |  |
| US14m  | 0.971    | 0.967        | 0        | 0.5   |  |  |  |

Table 2: GGS Model(formula)

|        |          | 1 1.      | 1.1         | ATO  |
|--------|----------|-----------|-------------|------|
| stream | r.square | dadj.r.sq | uaprexoalue | AIC  |
| F13m   | 0.838    | 0.820     | 0.0001      | 14.4 |
| F14m   | 0.839    | 0.821     | 0.0001      | 13.4 |
| OS13m  | 0.682    | 0.646     | 0.0017      | 17.0 |
| OS14m  | 0.655    | 0.617     | 0.0025      | 16.9 |
| US13m  | 0.778    | 0.750     | 0.0007      | 38.8 |
| US14m  | 0.764    | 0.735     | 0.0009      | 40.0 |