```
┌─────────────────────────────────────────────────────────────────────────────────────────────────────┐
│                                                                                                         │
│  ┌──────────────┐       ┌──────────────┐       ┌──────────────┐       ┌──────────────┐    ┌──────────────┐
│  │  spectral    │─────▶ │  pride json  │───┬──▶ │  uniport     │─────▶ │  PRIDE Json  │─┬─▶│ Elastic search│
│  │  libraries   │       │              │   │    │  mapping     │   ┌─▶ │  format      │ │  │  Indexer     │
│  └──────────────┘       └──────────────┘   │    └──────────────┘   │   └──────────────┘ │  └──────────────┘
│                                            │                       │                    │
│                                            │    ┌──────────────┐   │                    │   ┌──────────────┐
│                                            └──▶ │  ensembl     │───┘                    └─▶ │ dlmse Indexer│
│                                                 │  mapping     │                            │              │
│                                                 └──────────────┘                            └──────────────┘
│                                                                                                         │
│  ┌──────────────┐       ┌──────────────┐                                                                │
│  │  PRIDE       │─────▶ │ Sample pride │───┘                                                             │
│  │  projects    │       │ json         │                                                                │
│  └──────────────┘       └──────────────┘                                                                │
│                                                                                                         │
└─────────────────────────────────────────────────────────────────────────────────────────────────────┘
```

Label free experiment

source name	property 1	property 2	biological replicate	technical replicate	fraction
Sample 1					
Sample 2					

.
.
.

Sample 1 → proteomicslfq → mzTab

→ mzMLs

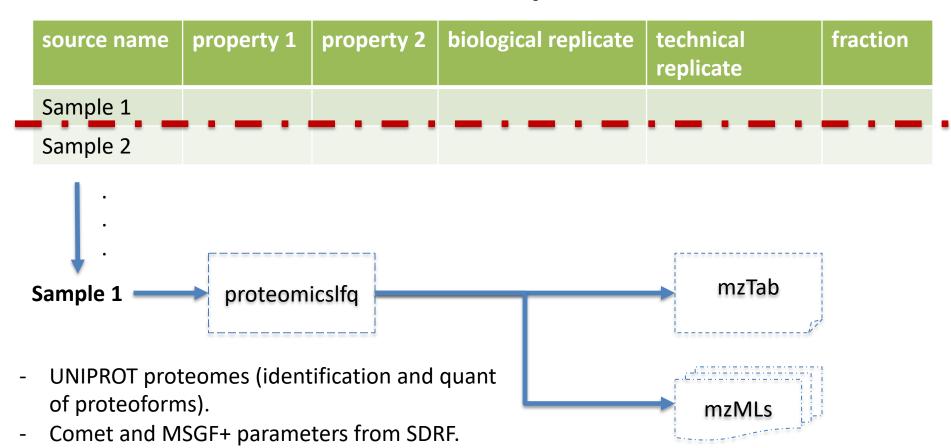- UNIPROT proteomes (identification and quant of proteoforms).
- Comet and MSGF+ parameters from SDRF.
- Percolator + Consensus ID
- Luciphor (if Phospho-proteomics)
- Epifany and protein quantitation at sample level.

Label free experiment

characteristics[organism] characteristics[organism part]
characteristics[disease] characteristics[phenotype]

	Sample 1	Sample 2	Sample 3	biological replicate	technical replicate
Protein 1	value1	value2	value3		
Protein 2	value4	value5	value6		
…					

	Sample 1	Sample 2	Sample 3	biological replicate	technical replicate
Peptide 1	value1	value2	value3		
Peptide 1	value4	value5	value6		
…					

MSstats (Differential expression)

	Sample 1	Sample 2	Sample 3	biological replicate	technical replicate	Condition
Protein 1	value1	value2	value3			
Protein 2	value4	value5	value6			
…						

MSsTats

	condition 1 vs doncdition 2
Protein 1	value1
Protein 2	value4
…	

MSstats (absolute quant)

	Sample 1	Sample 2	Sample 3	biological replicate	technical replicate	Condition
Protein 1	value1	value2	value3			
Protein 2	value4	value5	value6			
…						

MSsTats

	condition 1	condition 2
Protein 1	value1	value 5
Protein 2	value4	value 6
…		