

Bitter_Rafal

- Gravity **9.3 BLG**
- ABV **3.6 %**
- IBU **24**
- SRM **13.1**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|--------|-----|
| Grain | Viking Pale Ale malt | 4.1 kg (83.7%) | 80 % | 6 |
| Grain | Caramel/Crystal Malt - 120L | 0.5 kg (10.2%) | 72 % | 180 |
| Grain | Special B Malt | 0.3 kg (6.1%) | 65.2 % | 350 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil | Challenger | 25 g | 60 min | 8 % |
| Aroma (end of boil) | East Kent Goldings | 25 g | 10 min | 5.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | Fermentis |