

50. Export porter

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **29**
- SRM **36.8**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.2 liter(s)**
- Total mash volume **10.9 liter(s)**

Steps

- Temp **69 C**, Time **60 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **8.2 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **2 min** at **78C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--|----------------|--------|------|
| Grain | Colorado pale ale | 2 kg (73.5%) | 80 % | 5 |
| Grain | Fawcett - Brown | 0.22 kg (8.1%) | 72 % | 180 |
| Grain | Chocolate Malt (UK) Fawcett | 0.2 kg (7.4%) | 73 % | 887 |
| Grain | Special B Malt | 0.2 kg (7.4%) | 65.2 % | 315 |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.1 kg (3.7%) | 73 % | 1001 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Fuggles | 20 g | 60 min | 4.5 % |
| Boil | Fuggles | 10 g | 15 min | 4.5 % |
| Boil | Fuggles | 10 g | 10 min | 4.5 % |
| Boil | Fuggles | 10 g | 5 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------------------------|------|--------|---------|------------------|
| FM10 O czym szumią wierzby | Ale | Liquid | 1000 ml | Fermentum Mobile |