

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