

## X - Brown Porter - 41

---

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **33**
- SRM **19.8**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **75 C**, Time **1 min**
- Temp **100 C**, Time **60 min**

### Mash step by step

- Heat up **15.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **75C**
- Keep mash **60 min** at **100C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (56.6%)	80 %	5
Grain	Pilzński	1 kg (18.9%)	81 %	4
Grain	Strzegom Bursztynowy	0.5 kg (9.4%)	70 %	49
Grain	Brown Malt (British Chocolate)	0.5 kg (9.4%)	70 %	128
Grain	Strzegom Czekoladowy ciemny	0.15 kg (2.8%)	68 %	1200
Grain	Strzegom Karmel 150	0.15 kg (2.8%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	10 %
Boil	East Kent Goldings	20 g	50 min	5.1 %
Aroma (end of boil)	East Kent Goldings	30 g	10 min	5.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Wyeast - American Ale	Ale	Liquid	0.125 ml	Wyeast Labs
-----------------------	-----	--------	----------	-------------