

# PORTER WLP820

- Gravity **20.5 BLG**
- ABV **9 %**
- IBU **49**
- SRM **28.6**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **50 min**
- Evaporation rate **10 %/h**
- Boil size **27.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **28.2 liter(s)**
- Total mash volume **37.6 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **28.2 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **8.6 liter(s)** of **76C** water or to achieve **27.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (31.9%)	80 %	4
Grain	Strzegom Monachijski typ II	2.75 kg (29.3%)	79 %	22
Grain	Wędzony bukiem Viking Malt	1 kg (10.6%)	82 %	10
Grain	Strzegom Wiedeński	0.7 kg (7.5%)	79 %	10
Grain	Viking melanoidynowy	1 kg (10.6%)	75 %	60
Grain	CARAMEL AROMATIC MALT	0.36 kg (3.8%)	68 %	200
Grain	Strzegom Karmel 300	0.2 kg (2.1%)	70 %	299
Grain	Strzegom Czekoladowy jasny	0.07 kg (0.7%)	68 %	400
Grain	Strzegom Karmel 600	0.16 kg (1.7%)	68 %	601
Grain	Strzegom Czekoladowy ciemny	0.15 kg (1.6%)	68 %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
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Boil	Magnum	30 g	20 min	13.5 %
Boil	Marynka	30 g	15 min	13.6 %
Boil	Bullion	80 g	10 min	7.75 %

### Yeasts

Name	Type	Form	Amount	Laboratory
WLP820 - Oktoberfest/Märzen Lager Yeast	Lager	Liquid	300 ml	White Labs

### Extras

Type	Name	Amount	Use for	Time
Fining	whirflock	5 g	Boil	15 min