

# Brunatne

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **17**
- SRM **14**
- Style **Dunkelweizen**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **1 %**
- Size with trub loss **20.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **9 %/h**
- Boil size **24.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.4 liter(s) / kg**
- Mash size **20.2 liter(s)**
- Total mash volume **24.8 liter(s)**

## Steps

- Temp **45 C**, Time **10 min**
- Temp **53 C**, Time **10 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **20.2 liter(s)** of strike water to **47.8C**
- Add grains
- Keep mash **10 min** at **45C**
- Keep mash **10 min** at **53C**
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pszeniczny	2 kg (43.5%)	81 %	5
Grain	Strzegom Red Activ 30-40	1 kg (21.7%)	80 %	35
Grain	Strzegom Czekoladowy jasny	0.3 kg (6.5%)	68 %	400
Grain	Strzegom Cooke 40-60	0.2 kg (4.3%)	72 %	50
Grain	Weyermann - Acidulated Malt	0.1 kg (2.2%)	80 %	6
Grain	Strzegom Pilzneński	1 kg (21.7%)	80 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	15 g	60 min	4.8 %
Boil	Lublin (Lubelski)	15 g	30 min	4.8 %
Aroma (end of boil)	Hallertau Spalt Select	15 g	5 min	3.3 %

Aroma (end of boil)	Lublin (Lubelski)	8 g	5 min	4.8 %
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### Yeasts

Name	Type	Form	Amount	Laboratory
Bavarian Wheat 11	Wheat	Slant	300 ml	Gozdawa

### Extras

Type	Name	Amount	Use for	Time
Other	Glukoza	200 g	Bottling	---