

pils wędzony 3

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **41**
- SRM **4.4**
- Style **Other Smoked Beer**

Batch size

- Expected quantity of finished beer **29 liter(s)**
- Trub loss **5 %**
- Size with trub loss **30.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **36.7 liter(s)**

Mash information

- Mash efficiency **96 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **51 C**, Time **15 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **55.4C**
- Add grains
- Keep mash **15 min** at **51C**
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Sparge using **24.2 liter(s)** of **76C** water or to achieve **36.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem weyermann	2 kg (40%)	80 %	5
Grain	Weyermann - Smoked Malt	2 kg (40%)	81 %	6
Grain	Monachijski typ II 20-25 EBC Weyermann	1 kg (20%)	80 %	22

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	45 min	10.5 %
Boil	Iunga	20 g	45 min	10.5 %
Boil	Lublin (Lubelski)	25 g	20 min	3.8 %
Boil	Saaz (Czech Republic)	25 g	20 min	3.5 %
Boil	Lublin (Lubelski)	25 g	10 min	3.8 %
Boil	Saaz (Czech Republic)	25 g	10 min	3.5 %
Boil	Lublin (Lubelski)	25 g	5 min	3.8 %

Boil	Saaz (Czech Republic)	50 g	5 min	3.5 %
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Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Slant	200 ml	Fermentum Mobile