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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **32**
- SRM **5.1**

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 **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **13.2 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (79.5%)	80 %	4
Grain	Strzegom Monachijski typ I	0.5 kg (11.4%)	79 %	16
Grain	Aromatic Malt	0.3 kg (6.8%)	78 %	50
Grain	bestmalz zakwaszający	0.1 kg (2.3%)	78 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	50 min	13.5 %
Boil	Saaz (Czech Republic)	25 g	10 min	4.5 %
Aroma (end of boil)	Saaz (Czech Republic)	25 g	10 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
2124	Lager	Liquid	125 ml	---