Koźlak wędzony

- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **22**
- SRM **17.6**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **14.1 liter(s)**

Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.6 liter(s)**
- Total mash volume **12.8 liter(s)**

Steps

- Temp **66 C**, Time **20 min**
- Temp **100 C**, Time **10 min**
- Temp **70 C**, Time **20 min**
- Temp **100 C**, Time **1 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **9.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **20 min** at **66C**
- Keep mash **20 min** at **70C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Keep mash **1 min** at **100C**
- Keep mash **10 min** at **100C**
- Sparge using **7.7 liter(s)** of **76C** water or to achieve **14.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	1.4 kg *(43.8%)*	79 %	16
Grain	Słód Wędzony Steinbach	1.4 kg *(43.8%)*	80 %	5
Grain	Aromatyczny IREKS	0.4 kg *(12.5%)*	80 %	280

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	12 g	60 min	11 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	180 ml	Fermentis