Koźlak30a

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **21**
- SRM **18.9**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **30.8 liter(s)**
- Total mash volume **41 liter(s)**

Steps

- Temp **55 C**, Time **10 min**
- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **35 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **30.8 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **60 min** at **63C**
- Keep mash **35 min** at **72C**
- Keep mash **15 min** at **76C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg *(48.8%)*	81 %	4
Grain	Monachijski	3 kg *(29.3%)*	80 %	16
Grain	Strzegom Wiedeński	1 kg *(9.8%)*	79 %	10
Grain	Strzegom Karmel 300	0.25 kg *(2.4%)*	70 %	299
Grain	Weyermann - Caraamber	0.25 kg *(2.4%)*	75 %	65
Grain	Weyermann Caramunich 3	0.25 kg *(2.4%)*	76 %	150
Grain	Strzegom Karmel 600	0.25 kg *(2.4%)*	68 %	601
Grain	Strzegom Karmel 300	0.25 kg *(2.4%)*	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	50 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	30 g	15 min	4 %

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	17.25 g	Fermentis