nowy, lepszy Niemiec

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **21**
- SRM **30.1**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.3 liter(s)**
- Total mash volume **12 liter(s)**

Steps

- Temp **63 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **9.3 liter(s)** of strike water to **69.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **5 min** at **76C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	2.1 kg *(78.7%)*	80.5 %	4
Grain	red active	0.2 kg *(7.5%)*	79 %	35
Grain	Weyermann - Chocolate Wheat	0.3 kg *(11.2%)*	74 %	788
Grain	Jęczmień palony	0.07 kg *(2.6%)*	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnanger	13 g	60 min	2.5 %
Boil	Hallertau Spalt Select	15 g	60 min	3.9 %
Aroma (end of boil)	Hallertau Spalt Select	15 g	5 min	3.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	200 ml	---

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