Black & White

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **14**
- SRM **10.7**
- Style **Dunkelweizen**

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 **14 liter(s)**
- Total mash volume **18.6 liter(s)**

Steps

- Temp **46 C**, Time **10 min**
- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **50.3C**
- Add grains
- Keep mash **10 min** at **46C**
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	2.4 kg *(51.5%)*	85 %	4
Grain	Pilzneński	1.1 kg *(23.6%)*	81 %	4
Grain	Strzegom Monachijski typ II	0.8 kg *(17.2%)*	79 %	22
Grain	Czekoladowy	0.06 kg *(1.3%)*	60 %	788
Grain	Strzegom Karmel 150	0.3 kg *(6.4%)*	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	20 g	70 min	4 %
Boil	Lublin (Lubelski)	10 g	30 min	4 %
Boil	Lublin (Lubelski)	10 g	5 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory

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

Wb-06	Wheat	Dry	11 g	Safale