Dunkles I miejsce Małopolski 2024

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **22**
- SRM **15.5**
- Style **Munich Dunkel**

Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **0 %**
- Size with trub loss **60 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **70.6 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **45.9 liter(s)**
- Total mash volume **61.2 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **45.9 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **40 liter(s)** of **76C** water or to achieve **70.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski typ II 20-25 EBC Weyermann	10 kg *(65.4%)*	80 %	20
Grain	Viking Pilsner malt	3.5 kg *(22.9%)*	82 %	4
Grain	Melanoidynowy Castlemalting	1 kg *(6.5%)*	75 %	80
Grain	Weyermann - Carared	0.5 kg *(3.3%)*	75 %	45
Grain	Fawcett - Pszeniczny Czekoladowy	0.3 kg *(2%)*	73 %	1001

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Izabella	100 g	40 min	6.5 %
Aroma (end of boil)	Izabella	50 g	3 min	6.5 %

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