

Dunkelweizen

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **35**
- SRM **21.1**
- 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 **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **45 C**, Time **20 min**
- Temp **63 C**, Time **40 min**
- Temp **73 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **73C**
- Keep mash **1 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	3 kg (55.6%)	85 %	4
Grain	Strzegom Pilzneński	1 kg (18.5%)	80 %	4
Grain	Strzegom Monachijski typ I	1 kg (18.5%)	79 %	16
Grain	Jęczmień palony	0.3 kg (5.6%)	55 %	985
Grain	Strzegom Karmel 150	0.1 kg (1.9%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	40 g	40 min	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	400 ml	Fermentum Mobile