

# Dunkel #1

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **14**
- SRM **22.8**
- Style **Dunkelweizen**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **24.4 liter(s)**

## Steps

- Temp **44 C**, Time **20 min**
- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **18.3 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **50 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Wheat Malt Dark	3 kg (49.2%)	82 %	18
Grain	Monachijski typ II 20-25 EBC Weyermann	1.5 kg (24.6%)	80 %	20
Grain	Strzegom Wiedeński	1 kg (16.4%)	79 %	10
Grain	Weyermann - Carawheat	0.2 kg (3.3%)	77 %	125
Grain	Strzegom Czekoladowy jasny	0.2 kg (3.3%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.3%)	68 %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	30 g	60 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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FM41 Gwoździe i Banany	Wheat	Slant	120 ml	Fermentum Mobile
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