

# Dunkel

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **24**
- SRM **19.7**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **5 %**
- Size with trub loss **47.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **57.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **37.5 liter(s)**
- Total mash volume **50 liter(s)**

## Steps

- Temp **61 C**, Time **10 min**
- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **37.5 liter(s)** of strike water to **67.8C**
- Add grains
- Keep mash **10 min** at **61C**
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Sparge using **32.8 liter(s)** of **76C** water or to achieve **57.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	5 kg (40%)	79 %	16
Grain	Cara Ruby Castle	1 kg (8%)	72 %	49
Grain	Weyermann - Melanoiden Malt	1 kg (8%)	81 %	53
Grain	Chocolate Malt	0.5 kg (4%)	60 %	800
Grain	Strzegom Monachijski typ II	5 kg (40%)	79 %	22

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	100 g	60 min	4.2 %
Boil	Tettnanger	50 g	10 min	3.3 %
Boil	Tettnanger	50 g	5 min	3.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Dry	23 g	Mangrove Jack's

## Notes

- Brzeczka 11.07  
Po 7 dniach 15°  
burzliwa 14 dni  
Cicha 14 dni  
*Mar 11, 2022, 10:49 AM*