

# Black Witbier

- Gravity **12.3 BLG**
- ABV ---
- IBU **20**
- SRM **28.5**
- Style **Witbier**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.2 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

## Steps

- Temp **52 C**, Time **15 min**
- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **13.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **24.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (44.4%)	81 %	4
Grain	Wheat, Flaked	2 kg (44.4%)	77 %	4
Grain	Carafa II	0.25 kg (5.6%)	70 %	812
Grain	Strzegom Czekoladowy jasny	0.25 kg (5.6%)	68 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Summit	10 g	60 min	17 %
Boil	Summit	10 g	1 min	17 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - Belgian Witbier	Wheat	Slant	100 ml	Wyeast Labs

## Extras

Type	Name	Amount	Use for	Time
Spice	kolendra	20 g	Boil	10 min
Spice	curacao	20 g	Boil	10 min
Spice	anyż gwieździsty	10 g	Boil	10 min
Spice	rumianek	1 g	Boil	10 min

## Notes

- Zużywamy zapasy Summita  
*Jun 22, 2015, 11:05 AM*
- 1 gwiazdka anyżu  
*Jun 22, 2015, 11:15 AM*