

## Biały murzyn z mango 2

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **23**
- SRM **3.3**
- Style **Witbier**

### 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 **13.6 liter(s)**
- Total mash volume **18.2 liter(s)**

### Steps

- Temp **50 C**, Time **30 min**
- Temp **67 C**, Time **60 min**
- Temp **73 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **13.6 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **30 min** at **50C**
- Keep mash **60 min** at **67C**
- Keep mash **15 min** at **73C**
- Keep mash **1 min** at **78C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2 kg (44%)	80 %	4
Grain	Płatki owsiane	1.4 kg (30.8%)	85 %	3
Grain	Barley, Flaked	0.4 kg (8.8%)	70 %	4
Grain	Rye, Flaked	0.75 kg (16.5%)	78.3 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	60 min	10.7 %
Whirlpool	Citra	8 g	15 min	12 %
Whirlpool	Cascade	11 g	15 min	6.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	12.5 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Spice	kolendra	5 g	Boil	5 min
Spice	Curacao	10 g	Boil	5 min
Spice	kolendra	10 g	Boil	0 min
Spice	Curacao	20 g	Boil	0 min
Fining	Żelatyna	10 g	Secondary	1 day(s)