

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) |