

Mandziak

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **19**
- SRM **4.5**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **26.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **20.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Wheat Malt | 2.5 kg (42.4%) | 85 % | 5 |
| Grain | Weyermann - Pilsner Malt | 1.8 kg (30.5%) | 81 % | 5 |
| Grain | Weyermann - Pale Ale Malt | 1 kg (16.9%) | 85 % | 7 |
| Grain | Platki owsiane | 0.4 kg (6.8%) | 60 % | 3 |
| Grain | Weyermann - Carapils | 0.2 kg (3.4%) | 78 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Cascade | 20 g | 60 min | 6 % |
| Aroma (end of boil) | Cascade | 15 g | 15 min | 6 % |
| Aroma (end of boil) | Cascade | 15 g | 7 min | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|-------|----------------------|--------|-----------|-----------|
| Other | pulpa mango alphonso | 5.1 g | Secondary | 14 day(s) |