

Michait

- Gravity **22 BLG**
- ABV **9.9 %**
- IBU **89**
- SRM **51**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.2 liter(s) / kg**
- Mash size **17.8 liter(s)**
- Total mash volume **25.9 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **17.8 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------------|----------------|-------|------|
| Grain | Weyermann - Dark Wheat Malt | 0.5 kg (6.2%) | 85 % | 14 |
| Grain | Weyermann - Smoked Malt | 0.5 kg (6.2%) | 81 % | 6 |
| Grain | Weyermann - Carafa special II | 0.3 kg (3.7%) | 70 % | 1100 |
| Grain | Weyermann - Roasted Barley | 0.3 kg (3.7%) | 70 % | 1084 |
| Grain | Weyermann - Wheat Malt | 1.5 kg (18.5%) | 85 % | 5 |
| Grain | Weyermann - Caraaroma | 1 kg (12.3%) | 78 % | 400 |
| Grain | Weyermann - Pale Ale Malt | 2 kg (24.7%) | 85 % | 7 |
| Grain | Weyermann - Munich Malt type 2 | 2 kg (24.7%) | 77 % | 20 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 40 g | 60 min | 15.5 % |

| | | | | |
|------|------------------------|------|--------|--------|
| Boil | Enigma (AUS) | 10 g | 40 min | 17.2 % |
| Boil | Columbus/Tomahawk/Zeus | 20 g | 20 min | 15.5 % |
| Boil | Columbus/Tomahawk/Zeus | 17 g | 10 min | 15.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Dry | 20 g | Mangrove Jack's |