

Bitter Pokazy

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **23**
- SRM **10.2**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **68 C**, Time **70 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------|--------------|-------|-----|
| Grain | Pilzneński | 4 kg (80%) | 81 % | 4 |
| Grain | Cara Crystal | 0.5 kg (10%) | 79 % | 150 |
| Grain | Caramunich® typ I | 0.5 kg (10%) | 73 % | 80 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Fuggles | 30 g | 60 min | 4.5 % |
| Boil | Amarillo | 20 g | 15 min | 9.5 % |
| Aroma (end of boil) | Fuggles | 30 g | 0 min | 4.5 % |
| Aroma (end of boil) | Amarillo | 40 g | 0 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------------|------|--------|---------|------------|
| FM10 O czym szumią wierzby | Ale | Liquid | 1000 ml | --- |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------|--------|---------|--------|
| Fining | Whirflock | 7 g | Boil | 70 min |

| | | | | |
|-------------|-----|-----|------|--------|
| Water Agent | Sól | 7 g | Boil | 70 min |
|-------------|-----|-----|------|--------|