

Brut'al 2.0

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **11**
- SRM **3.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **7.9 liter(s)**
- Total mash volume **10.1 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **7.9 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------|---------------|--------|-----|
| Grain | Pilzneński IREKS | 2 kg (80%) | 81 % | 4 |
| Grain | Płatki ryżowe | 0.25 kg (10%) | 78.3 % | 2 |
| Sugar | Cukier biały | 0.25 kg (10%) | 80 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------------------------|--------|----------|------------|
| Aroma (end of boil) | Mosaic | 15 g | 10 min | 10 % |
| Aroma (end of boil) | Galaxy | 15 g | 0 min | 15 % |
| Dry Hop | Lubelski Polish Hops 2018 | 17 g | 5 day(s) | 2.6 % |
| Dry Hop | Galaxy | 35 g | 3 day(s) | 15 % |
| Dry Hop | Mosaic | 38 g | 3 day(s) | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| Us-05 | Ale | Dry | 5.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------|--------------|--------|---------|-----------|
| Other | Glukoamylaza | 2 g | Primary | 20 day(s) |