

## Brut'al 2.0

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- 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) |