

Urodzinowy murzynek.

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **88**
- SRM **29.4**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **26.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **29.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **35.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **23.3 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|----------------|----------------------------|----------------|-------|------|
| Grain | Briess - Pale Ale Malt | 5 kg (66.4%) | 80 % | 7 |
| Grain | Carafa III | 0.33 kg (4.4%) | 70 % | 1034 |
| Liquid Extract | WES ekstrakt słodowy jasny | 1.7 kg (22.6%) | 80 % | --- |
| Grain | Carafa II | 0.5 kg (6.6%) | 70 % | 812 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|-----------|------------|
| Boil | Magnum | 20 g | 60 min | 13.5 % |
| Boil | Citra | 20 g | 60 min | 12 % |
| Boil | Cascade | 50 g | 15 min | 6 % |
| Boil | Amarillo | 65 g | 15 min | 9.5 % |
| Boil | Mosaic | 50 g | 5 min | 10 % |
| Boil | Citra | 60 g | 5 min | 12 % |
| Dry Hop | Citra | 70 g | 10 day(s) | 12 % |
| Dry Hop | Amarillo | 135 g | 10 day(s) | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 23 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|-------|
| Fining | mech irlandzki | 5 g | Boil | 5 min |