

## Miedziany Drań 3.0

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **23**
- SRM **7.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **2500 liter(s)**
- Trub loss **5 %**
- Size with trub loss **2750 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **3450 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **2055 liter(s)**
- Total mash volume **2740 liter(s)**

### Fermentables

| Type  | Name                       | Amount            | Yield | EBC |
|-------|----------------------------|-------------------|-------|-----|
| Grain | Castle Pale Ale            | 471.33 kg (68.8%) | 80 %  | 8   |
| Grain | Strzegom Monachijski typ I | 72.27 kg (10.6%)  | 79 %  | 16  |
| Grain | Pszeniczny                 | 72.27 kg (10.6%)  | 85 %  | 4   |
| Grain | karmelowy 350              | 12.57 kg (1.8%)   | 78 %  | 350 |
| Grain | Weyermann - Carapils       | 31.42 kg (4.6%)   | 78 %  | 4   |
| Grain | Płatki pszeniczne          | 12.57 kg (1.8%)   | 85 %  | 3   |
| Grain | Płatki owsiane             | 12.57 kg (1.8%)   | 85 %  | 3   |

### Hops

| Use for   | Name               | Amount | Time   | Alpha acid |
|-----------|--------------------|--------|--------|------------|
| Boil      | hallertauer taurus | 400 g  | 70 min | 15.8 %     |
| Boil      | zeus               | 400 g  | 70 min | 15.7 %     |
| Boil      | lunga              | 1200 g | 20 min | 11 %       |
| Boil      | Citra              | 1300 g | 10 min | 12 %       |
| Boil      | Cascade            | 1400 g | 5 min  | 6 %        |
| Whirlpool | Zeus               | 800 g  | 60 min | 15.7 %     |
| Whirlpool | Citra              | 800 g  | 60 min | 12 %       |
| Whirlpool | Cascade            | 800 g  | 60 min | 6 %        |
| Whirlpool | Simcoe             | 800 g  | 60 min | 13.2 %     |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 2000 g | Fermentis  |