

# Polish ćerne ale

- Gravity **8.5 BLG**
- ABV **3.3 %**
- IBU **24**
- SRM **11**

## Batch size

- Expected quantity of finished beer **70 liter(s)**
- Trub loss **5 %**
- Size with trub loss **73.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **88.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **35.4 liter(s)**
- Total mash volume **47.2 liter(s)**

## Fermentables

| Type                  | Name                       | Amount         | Yield | EBC  |
|-----------------------|----------------------------|----------------|-------|------|
| Grain                 | Pilzneński                 | 8 kg (67.8%)   | 81 %  | 4    |
| Grain                 | Monachijski                | 2.5 kg (21.2%) | 80 %  | 16   |
| Grain                 | Żytni                      | 0.7 kg (5.9%)  | 85 %  | 8    |
| Grain                 | Weyermann - Carafa I       | 0.15 kg (1.3%) | 70 %  | 690  |
| dodane na wyśładzanie |                            |                |       |      |
| Grain                 | Carafa III                 | 0.15 kg (1.3%) | 70 %  | 1034 |
| dodane na wyśładzanie |                            |                |       |      |
| Grain                 | Strzegom Czekoladowy jasny | 0.3 kg (2.5%)  | 68 %  | 400  |
| dodane na wyśładzanie |                            |                |       |      |

## Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | marynka    | 28 g   | 30 min | 8.8 %      |
| Boil    | Cascade PL | 50 g   | 30 min | 5.5 %      |
| Boil    | Cascade PL | 50 g   | 5 min  | 5.5 %      |
| Boil    | Magnum     | 14 g   | 60 min | 13.5 %     |
| Boil    | Cascade PL | 50 g   | 1 min  | 5.5 %      |

## Yeasts

| Name                              | Type | Form  | Amount | Laboratory      |
|-----------------------------------|------|-------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale  | Slant | 300 ml | Mangrove Jack's |