

Czarna Mańka

- Gravity **14.3 BLG**
- ABV ---
- IBU **76**
- SRM **30.2**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **3.5 %**
- Size with trub loss **13.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **4 %/h**
- Boil size **14.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **11.2 liter(s)**
- Total mash volume **14.4 liter(s)**

Steps

- Temp **66 C**, Time **70 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **11.2 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **6.6 liter(s)** of **76C** water or to achieve **14.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|------|
| Grain | Strzegom Pale Ale | 1.5 kg (46.9%) | 79 % | 6 |
| Grain | Strzegom Pilzneński | 1.5 kg (46.9%) | 80 % | 4 |
| Grain | Strzegom pszenica prażona | 0.1 kg (3.1%) | 70 % | 1000 |
| Grain | Jęczmień palony | 0.1 kg (3.1%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Celeia | 5 g | 60 min | 5.3 % |
| Boil | Progress | 5 g | 60 min | 6.9 % |
| Boil | Citra | 5 g | 60 min | 13.5 % |
| Boil | Equinox | 5 g | 60 min | 13.4 % |
| Boil | Mosaic | 5 g | 60 min | 11.7 % |
| Boil | Celeia | 5 g | 15 min | 5.3 % |
| Boil | Progress | 5 g | 15 min | 6.9 % |
| Boil | Citra | 5 g | 15 min | 13.5 % |
| Boil | Equinox | 5 g | 15 min | 13.4 % |
| Boil | Mosaic | 5 g | 15 min | 11.7 % |

| | | | | |
|------|----------|-----|-------|--------|
| Boil | Celeia | 5 g | 5 min | 5.3 % |
| Boil | Progress | 5 g | 5 min | 6.9 % |
| Boil | Citra | 5 g | 5 min | 13.5 % |
| Boil | Equinox | 5 g | 5 min | 13.4 % |
| Boil | Mosaic | 5 g | 5 min | 11.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | Safeale |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------------------|--------|---------|--------|
| Fining | Mech Irlandzki | 5 g | Boil | 15 min |
| Flavor | Skórka cytrynowa (suszona) | 10 g | Boil | 15 min |
| Flavor | Skórka cytrynowa (suszona) | 10 g | Boil | 10 min |
| Flavor | Skórka cytrynowa (suszona) | 17 g | Boil | 5 min |