

Półmaraton

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **53**
- SRM **8**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **12 %/h**
- Boil size **27.4 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

Steps

- Temp **64 C**, Time **75 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **75 min** at **64C**
- Keep mash **10 min** at **78C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **27.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|--------|-----|
| Grain | Słód Pale Ale Strzegom | 5 kg (75.8%) | 79 % | 6 |
| Grain | Słód Pszeniczny Bestmalz | 1 kg (15.2%) | 82 % | 5 |
| Grain | Słód Caramel Pils | 0.35 kg (5.3%) | 75 % | 4 |
| Grain | Słód Crystal 160 EBC | 0.25 kg (3.8%) | 73.5 % | 155 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Mosaic | 10 g | 45 min | 12.3 % |
| Boil | Citra | 10 g | 45 min | 12.9 % |
| Boil | Mosaic | 10 g | 15 min | 12.3 % |
| Boil | Citra | 10 g | 15 min | 12.9 % |
| Boil | Amarillo | 10 g | 15 min | 8.5 % |
| Boil | Mosaic | 10 g | 7 min | 12.3 % |
| Boil | Citra | 10 g | 7 min | 12.9 % |
| Boil | Amarillo | 10 g | 7 min | 8.5 % |
| Boil | Mosaic | 15 g | 2 min | 12.3 % |
| Boil | Citra | 15 g | 2 min | 12.9 % |

| | | | | |
|---------------------|----------|------|----------|--------|
| Boil | Amarillo | 20 g | 2 min | 8.5 % |
| Aroma (end of boil) | Mosaic | 10 g | 0 min | 12.3 % |
| Aroma (end of boil) | Citra | 10 g | 0 min | 12.9 % |
| Aroma (end of boil) | Amarillo | 10 g | 0 min | 8.5 % |
| Dry Hop | Mosaic | 50 g | 2 day(s) | 12.3 % |
| Dry Hop | Citra | 50 g | 2 day(s) | 12.9 % |
| Dry Hop | Amarillo | 50 g | 2 day(s) | 8.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------|------|------|--------|------------|
| ALE 514 | Ale | Dry | 12.5 g | Mauribrew |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|--------|
| Water Agent | Gips piwowarski | 2 g | Mash | --- |
| Fining | Mech Irlandzki | 5 g | Boil | 15 min |