

# Kwaśna Hela

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **20**
- SRM **4.5**
- Style **Fruit Beer**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **10.8 liter(s)**
- Total mash volume **13.5 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **10.8 liter(s)** of strike water to **67.3C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.1 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield  | EBC |
|-------|-----------------------------|----------------|--------|-----|
| Grain | Weyermann - Pale Ale Malt   | 1 kg (37%)     | 85 %   | 7   |
| Grain | BESTMALZ - Best Pilsen      | 1 kg (37%)     | 80.5 % | 4   |
| Grain | BESTMALZ - Best Wheat Malt  | 0.5 kg (18.5%) | 82 %   | 4   |
| Grain | Abbey Malt Weyermann        | 0.1 kg (3.7%)  | 75 %   | 45  |
| Grain | Weyermann - Acidulated Malt | 0.1 kg (3.7%)  | 80 %   | 6   |

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Oktawia | 10 g   | 60 min | 8 %        |
| Boil    | Oktawia | 15 g   | 5 min  | 8 %        |

## Yeasts

| Name         | Type | Form  | Amount  | Laboratory                |
|--------------|------|-------|---------|---------------------------|
| L. Plantarum | Ale  | Slant | 1100 ml | starter z 6x Sanprobi IBS |

|                               |     |       |       |            |
|-------------------------------|-----|-------|-------|------------|
| WLP001 - California Ale Yeast | Ale | Slant | 50 ml | White Labs |
|-------------------------------|-----|-------|-------|------------|

### Extras

| Type   | Name             | Amount | Use for   | Time     |
|--------|------------------|--------|-----------|----------|
| Flavor | Czarna porzeczka | 1200 g | Secondary | 7 day(s) |