

## america

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- Gravity **12.4 BLG**
- ABV ---
- IBU **31**
- SRM **7.5**
- Style **American Wheat or Rye Beer**

### Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **3 %**
- Size with trub loss **27.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.6 liter(s)**
- Total mash volume **23.5 liter(s)**

### Steps

- Temp **43 C**, Time **20 min**
- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **17.6 liter(s)** of strike water to **46.8C**
- Add grains
- Keep mash **20 min** at **43C**
- Keep mash **15 min** at **53C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **21.8 liter(s)** of **76C** water or to achieve **33.5 liter(s)** of wort

### Fermentables

| Type  | Name                          | Amount          | Yield | EBC |
|-------|-------------------------------|-----------------|-------|-----|
| Grain | Pszeniczny                    | 2.5 kg (42.6%)  | 85 %  | 4   |
| Grain | Viking Pale Ale malt          | 2.5 kg (42.6%)  | 80 %  | 5   |
| Grain | Pszenica niesłodowana         | 0.25 kg (4.3%)  | 75 %  | 3   |
| Grain | Strzegom pszenica prażona     | 0.25 kg (4.3%)  | 70 %  | 6   |
| Grain | zakwaszający                  | 0.125 kg (2.1%) | 70 %  | 7   |
| Grain | Karmelowy Pszeniczny Strzegom | 0.25 kg (4.3%)  | 79 %  | 130 |

### Hops

| Use for             | Name       | Amount | Time     | Alpha acid |
|---------------------|------------|--------|----------|------------|
| Aroma (end of boil) | Citra      | 20 g   | 60 min   | 12 %       |
| Aroma (end of boil) | Amarillo   | 10 g   | 60 min   | 9.5 %      |
| Dry Hop             | Lemon drop | 50 g   | 7 day(s) | 4.6 %      |
| Dry Hop             | Citra      | 20 g   | 7 day(s) | 12 %       |

|         |          |      |          |       |
|---------|----------|------|----------|-------|
| Dry Hop | Amarillo | 20 g | 7 day(s) | 9.5 % |
|---------|----------|------|----------|-------|

### Yeasts

| Name                                   | Type  | Form   | Amount | Laboratory |
|--|-------|--------|--------|------------|
| WLP320 - American Hefeweizen Ale Yeast | Wheat | Liquid | 40 ml  | White Labs |

### Extras

| Type  | Name              | Amount | Use for | Time   |
|-------|-------------------|--------|---------|--------|
| Herb  | trawa cytrynowa   | 20 g   | Boil    | 10 min |
| Spice | skórka bergamotki | 20 g   | Boil    | 10 min |