# Duathlon

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- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **48**
- SRM **37.3**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **80 min**
- Evaporation rate **14 %/h**
- Boil size **20.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **16.7 liter(s)**

## Steps

- Temp **67 C**, Time **80 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **12.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **80 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **20.6 liter(s)** of wort

## Fermentables

| Type | Name | Amount | Yield | EBC |
|---|---|---|---|---|
| Grain | słód pilzneński | 2.73 kg *(57%)* | 80 % | 3 |
| Grain | słód monachijski ciemny | 0.82 kg *(17.1%)* | 78 % | 22 |
| Grain | słód pszeniczny jasny | 0.14 kg *(2.9%)* | 82 % | 5 |
| Grain | słód karmelowy 600 | 0.14 kg *(2.9%)* | 68 % | 600 |
| Grain | słód Caramunich typ I | 0.07 kg *(1.5%)* | 73 % | 90 |
| Grain | słód barwiący | 0.07 kg *(1.5%)* | 65 % | 1400 |
| Grain | słód Carafa typ I | 0.07 kg *(1.5%)* | 65 % | 900 |
| Grain | słód żytni palony | 0.14 kg *(2.9%)* | --- % | 650 |
| Adjunct | palony jęczmień | 0.2 kg *(4.2%)* | --- % | 1150 |
| Adjunct | płatki jęczmienne | 0.27 kg *(5.6%)* | --- % | 4 |
| Adjunct | płatki owsiane | 0.14 kg *(2.9%)* | --- % | 3 |

## Hops

| Use for | Name | Amount | Time | Alpha acid |
|---|---|---|---|---|
| First Wort | Zeus | 6.82 g | 80 min | 15.5 % |
| Boil | Citra | 10.23 g | 40 min | 13.7 % |

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

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|---|---|---|---|---|
| Boil | Simcoe | 10.23 g | 15 min | 13.2 % |
| Boil | Citra | 10.23 g | 10 min | 13.7 % |
| Boil | Cascade | 13.64 g | 5 min | 8.1 % |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|---|---|---|---|---|
| Safeale US-05 | Ale | Dry | 11.5 g | Fermentis |

## Extras

| Type | Name | Amount | Use for | Time |
|---|---|---|---|---|
| Fining | mech irlandzki | 4.77 g | Boil | 15 min |
| Other | pożywka dla drożdży | 4.77 g | Boil | 15 min |