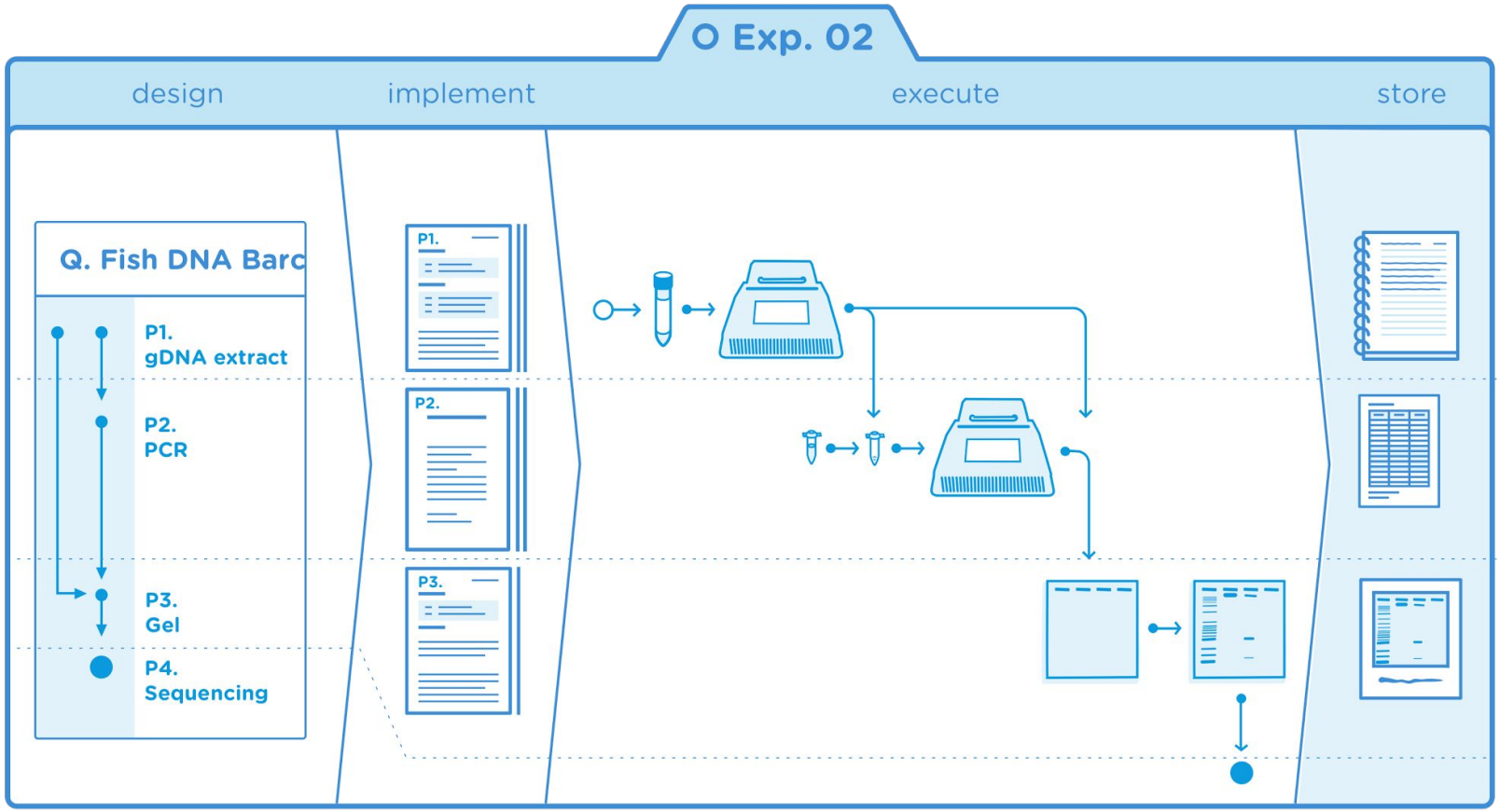

O Exp. 02
design
implement
execute
store
Q. Fish DNA Barc
P1.
gDNA extract
P2.
PCR
P3.
Gel
P4.
Sequencing
P1.
P2.
P3.

5:15 PM

### Found Fish Barcoding Primers

Found reliable #primers published in #ref:2012Weigt - see table 1 "Primer table for fish PCR (and M13 sequencing primers)".

Next, ordering oligos from IDT or operon mgh.

added 2012 Weigt DNA Barcoding FIshes.pdf ref:2012Weigt

primer

| | |
|---|---|
| fishCO1-F | tcaacyaatcayaaagatatyggcac |
| fishCO1-R | acttcygggtgrccraaraatca |

5:32 PM

### Ordered fish barcoding primers from Eurofins

20 nmole salt-free "PCReady Primers" from Eurofins, confirmation no. 420814. $4.90 a piece.

added 2016-01-15_oligos_eurofin 420814.pdf

17 Jan 2016

9:50 AM oligo fishCO1-F oligo fishCO1-R *added to inventory*

10:10 AM

### PCR test of Fish barcoding primers with sushi samples

running with PCR reaction from #ref:2012Weight

**Protocol: Cowell/PCR**

primer

| | |
|---|---|
| primers | fishCO1-F, fishCO1-R |
| samples | **Sushi_1**, Sushi_2, Sushi_3, Sushi_4, Sushi_5, Albumin |

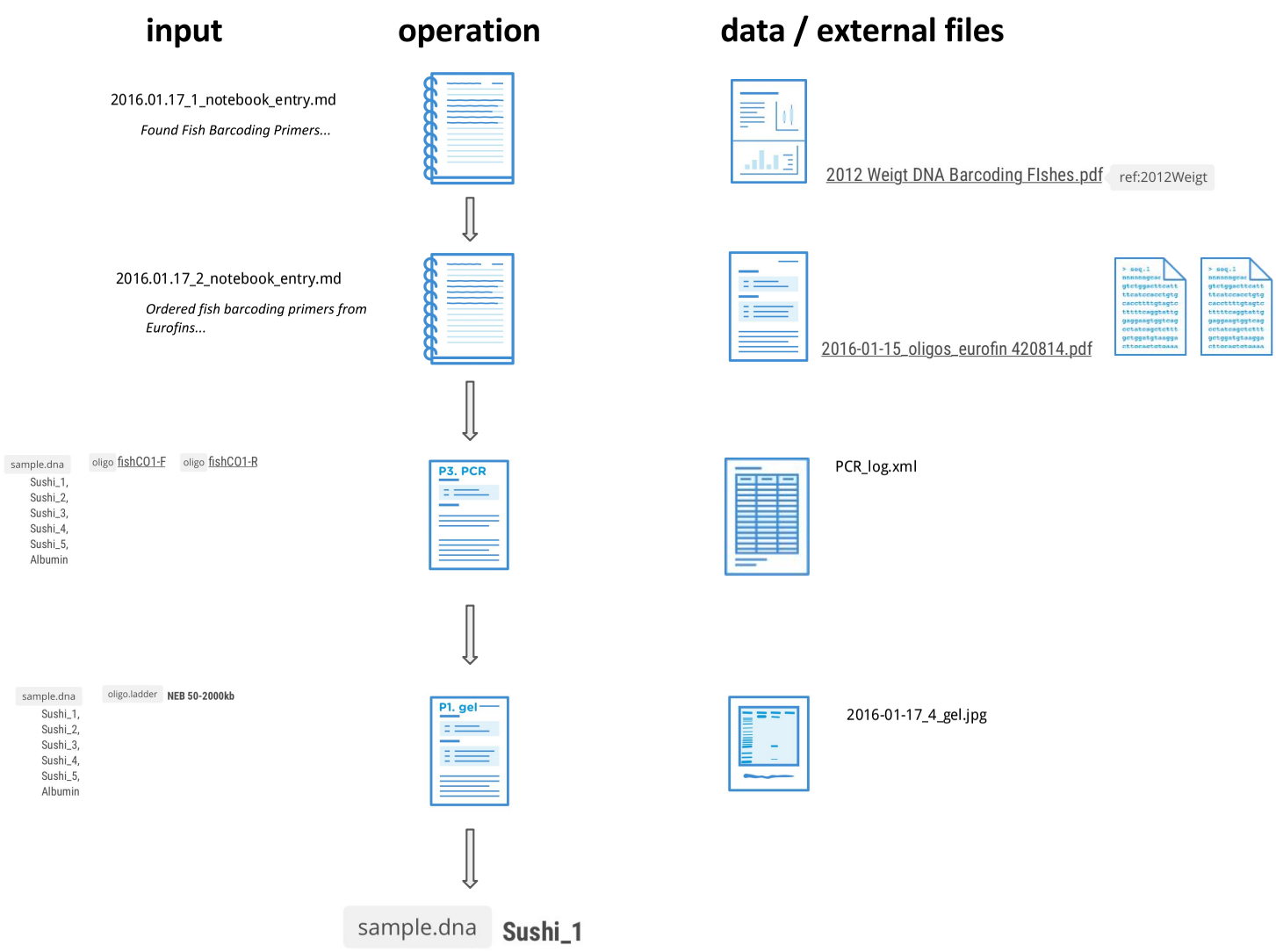
Click to create new entry

or Drag Files Here

oligo fishCO1-F oligo fishCO1-R

sample.dna

Sushi_1,
Sushi_2,
Sushi_3,
Sushi_4,
Sushi_5,
Albumin


input
operation
data / external files
2016.01.17_1_notebook_entry.md
Found Fish Barcoding Primers...
2012 Weigt DNA Barcoding FIshes.pdf
ref:2012Weigt
2016.01.17_2_notebook_entry.md
Ordered fish barcoding primers from Eurofins...
2016-01-15_oligos_eurofin 420814.pdf
sample.dna
Sushi_1,
Sushi_2,
Sushi_3,
Sushi_4,
Sushi_5,
Albumin
oligo fishCO1-F
oligo fishCO1-R
P3. PCR
PCR_log.xml
sample.dna
Sushi_1,
Sushi_2,
Sushi_3,
Sushi_4,
Sushi_5,
Albumin
oligo.ladder
NEB 50-2000kb
P1. gel
2016-01-17_4_gel.jpg
sample.dna
Sushi_1

```
note:
  timestamp: 2012-10-03 11:13:12.10 -7
  intent: "test epibio quickextract kit with fish tissue"
  project: "genelaser_test1"
```

Testing out genomic purification using EpiBio QuickExtract kit. Trying 6 samples to start:

```
samples[epibiotest1]:
  lc: "left cheek, rubbed 10 sec"
  ham: "hamachi sample from Moshi Moshi takeout order"
  mak: "maki sample from Moshi Moshi takeout order"
  neg: "negative control, nothing swabbing"
  col: "positive control, 100 mg of frozen tuna tissue from sample:2122"
  tab: "table top, 5cm streak rubbed 30 sec"
  _file: "samples/2012-10-03_epibiotest1.csv"
```

First protocol! woot. This content is still part of the first block.

Above see sample data stored inline. Should this be the canonical place for it? Or should it reside in a more central json file and be included by reference? Which is less likely for users to screw up…?

`[img:"data/2012-10-03_epibiotest1_sushi_samples.jpg"]`

```
op[1]:
  timestamp: 2012-10-03 11:22:01.33 -7
  protocol: Epibio-quickextract-1@ceba48e
  samples: epibiotest1
  qc: op[2]
```

A new note block! This one is associated with the `Epibio-quickextract-1` operation block above. This is where we would write any notes about how the protocol went.

---

```
op[2]:
  timestamp: 2012-10-03 11:40:12.53 -7
  protocol: nanodrop_OD-260-280
  in: op[1]
  out: "data/qc/2012-10-03.csv"
```

Another Note (or is it operation?).

`[table:"data/qc/2012-10-03.csv"]` ← viewer renders inline

Quickextract seems to work; deviation in gDNA concentration might be a problem. Their whitepaper suggests a range of 7 - 25 ng / uL when it's working properly. `[ref:2012Weight]`.

Also see `[doi:10.1007/978-1-61779-591-6_6]`.

---

```
Notebook files have two kinds of top-level metadata blocks: <operation> and
<note>. <note>s are associated with the closest preceding <operation>. <note>s
can contain data tables, sample tables, protocol definitions, etc.,
represented inline or by reference via json or yaml blocks.

<note>s begin with `timestamp: <isodate>` metadata block. Additional metadata is
inherited from the project.json file

render samples as table view;
TODO how is it automagically stored in samples/2012-10-03_genelaser-test1.csv?
organize content by experiment? i.e.

  experiments/
  ├── 2012-10-03_genelaser-test1/
  ├──── index.md
  ├──── samples.csv
  ├──── images/
  ├──── data/
  ├──── notes/
  ├── 2012-10-06_another-test1/
  ├──── index.md
  ├──── data/
  ├──── notes/
  index.md
  private/
  project.json
  protocols/
  plugins/
  references/
  ├── references.bib
  ├── 2010 weight DNA Barcoding Fishes.pdf

explicit in/out tags (no typerange tho) in <op> definition

op:
  _id: 1
  timestamp: 2012-10-03 11:22:01.33 -7
  protocol: Epibio-quickextract-1@ceba48e
  in: cells.tissue # <-- implicit
  out: DNA.genomic # <-- implicit
  samples: [epibiotest1, epibiotest1_rep2]
  qc: op[2]
```

## materials

| type | description | |
|---|---|---|
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## operation

description

notes

## samples

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## materials

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## operation

description

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## samples

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## operation

description

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## samples

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## materials

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## operation

description

notes

## samples

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