How to Track Batches Without Driving Yourself Crazy
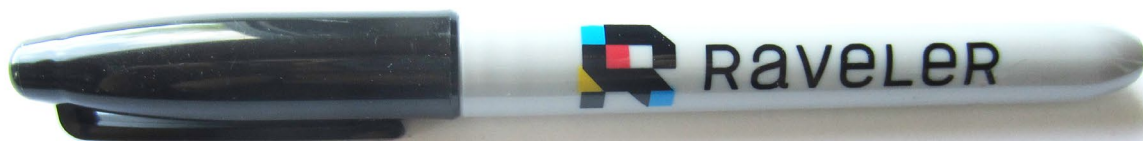
RAVELER

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Tracking batches is required of all food businesses. Although the complexity of the process varies depending on what kind of regulatory authority you answer to, everyone is expected to keep track of when they make the things they make. For restaurants and others who report to local health departments, this can be as simple as just making sure that things are labeled and dated. Ensuring that you always have a sharpie and a roll of blue tape handy is basically all you need to comply with those requirements.

But what about everyone else? For many food businesses, especially those that sell wholesale, there is a lot more to batch tracking than that. A comprehensive batch tracking system includes: tracking ingredient lots, assigning batch numbers, recording batch activities and measurements/ quality assurance (QA) testing.

Maybe you know that you have to track all of this information, but because it feels so overwhelming you haven't started yet. You are not alone. We talk to people all the time who know they need to track batches, but just can't seem to get started. There are so many moving parts, and you don't want to put effort into something that won't work.

Regulatory authority folks give out a lot of rules, but little guidance on how to follow them. This guide is not meant to be a substitute for guidance from whatever authority you report to. It is a step-by-step guide to turning that guidance into an actionable system that works. We've spent plenty of time working these things out ourselves, and we know how frustrating it can be. After years establishing systems in our own businesses, and working to help others do the same, we've found some simple ways to get things up to speed without driving ourselves crazy. We want to share these things with you, because the world needs independent food businesses like yours, and we want you to succeed.

We are here to say that you don't have to do this alone. Batch tracking does not have to drive you crazy. Rather than putting this off to a mythical future that will never come, let's just get this done today. We'll work backwards, review everything you have to track, and then find the easiest way to track it.

One thing that most authorities agree on is that they want to see that things are getting recorded as they happen, not retroactively. The prevailing wisdom is that if you don't write it down, you didn't do it. For this reason, they do not like to see regular spreadsheets being used for this purpose. They prefer to see electronic systems with time stamped entries, or paper systems that look like they're being used (i.e. are stained, sticky or otherwise seem like they've been in the kitchen).

Everything you develop through this guide will also give you a jumpstart to using Raveler, a web-based batch tracking app you can start using right away.

This worksheet will help you reframe your operations and reconsider them in a more linear fashion. The companion editable google sheet template will help you format everything into an easy, repeatable system that can be easily updated as things change. In the end, you'll have something that can be printed out and used as is, or can easily be transitioned into an electronic system.

What you will need to create your new batch tracking system:

- This guide (for best results, print it out)
- A pen or pencil
- The companion google sheet (click here!)
- A roll of blue tape
- A sharpie

You may also want:

- Any information or guidance your regulatory authority has given you in the past
- Your recipes or formulas for quick reference

Step 1: What Do You Need to Track?

Who do you get health inspections from? Check all that apply.

- ☐ The local health department or inspectional services
- ☐ The FDA
- ☐ The USDA
- ☐ The Alcohol Commission
- ☐ Other _____

If you haven't received any specific guidance from your regulatory authority, now might be a good time to make a quick call. Tell them that you're starting a new batch tracking system, and want to make sure you understand exactly what they want to see from your type of business. Be as specific as possible, and don't shy away from what they say. Ask clarifying questions if you don't understand.

Most of the time, they will want you to keep a batch log that at least tracks the products you make, their individual batch numbers, the date those batches are made, and who made them.

You may also need to track ingredient lots, which tracks specifically which shipment or package of ingredient went into which batch of product. For example, which bag of flour was used in a given batch of cookies.

There may be specific batch activities or QA measurements they want you to record. If you have a multi-step batch process or it happens over the course of several days, you may want to ask if they need you to record when these steps happen. If there are measurements you have to take such as checking temperature, pH, etc, at what point in the process do they want you to take those measurements?

Even if your regulatory authority does not require you to do these things, there are some things you may want to record anyway. You may want to regularly record qualitative notes such as color, flavor profiles, or texture.

What does your regulatory authority want to see from your batch tracking system?

☐ A Batch Log
☐ Ingredient Lots
☐ Batch Activities (if so, describe below)
☐ QA Measurements (if so, describe below)

Are there any additional things you want to track, for your own curiosity or to produce a consistent product? List them here.

Step 2: What Do You Make?

Let's start with your products. A product is anything you make and sell to a customer. List all of the products you make below in the first column. If you have more than 10 products, continue this list on a seperate sheet of paper.

Product Name	Batch Prefix

Let's Talk About Batch Numbers.

There are many ways to make good batch numbers, and it doesn't really matter what you choose as long as you're consistent and the numbers are always unique.

You'll want to include batch prefixes in your batch numbers- especially if you have more than one product. This is usually a few letters that serve as shorthand for the product name. For example, if you make chocolate chip cookies, the batch prefix could be "CC". Go back to your list of products and specify a batch prefix for each product.

Raveler automatically generates batch numbers based on whatever schema you choose. Read more about it here

Now decide how you want the rest of the batch number to look. You could choose to simply count off the batches (in which case, your 21st batch of chocolate chip cookies would be batch #CC21). If you want to use best practices, we suggest you use the Julian Calendar.

About The Julian Calendar

The Julian Calendar uses the day of the year rather than the usual month/date format. This is beautiful, because it looks like a random number, but it actually means something to you when you read it.

For example, if you made that batch of chocolate chip cookies on June 9th, 2020, it would be batch #CC2016101. Here's how that works:

CC 20 161 01

| Batch Prefix CC for Chocolate Chip | The Year 2020 | The Day June 9th is the 161th day of the year | Batch Order This is the first batch of chocolate chip cookies made that day |
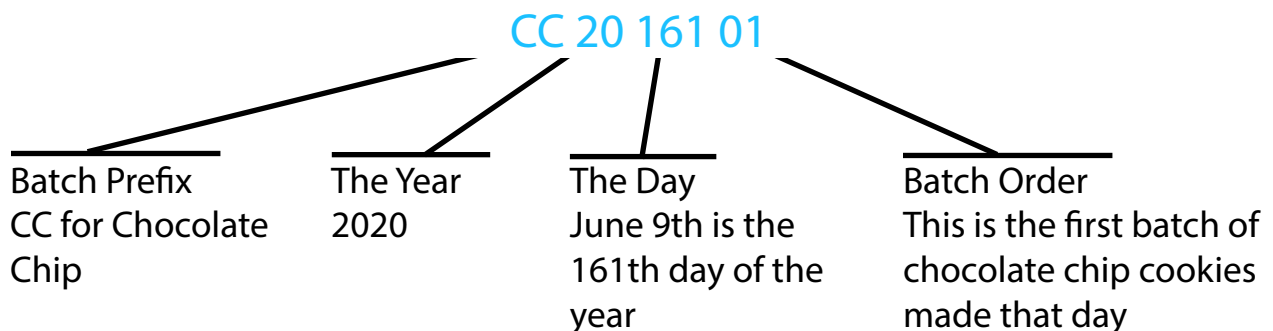
There are free apps you can get that will give you the Julian date.

You can also print out a Julian calendar for your reference (for example, this free download is available at www.calendarlabs.com) and hang it up in your production area. If you decide to use a paper system to track batches, this is probably the best way to go.

If you use a web-based batch tracking system this is not necessary, as you'll be able to generate these numbers automatically based on your preferred schema.

Before we move on to start building your system, you should decide what type of batch numbering system feels right to you.

Julian Date Calendar for Year 2020

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1	32	61	92	122	153	183	214	245	275	306	336
2	2	33	62	93	123	154	184	215	246	276	307	337
3	3	34	63	94	124	155	185	216	247	277	308	338
4	4	35	64	95	125	156	186	217	248	278	309	339
5	5	36	65	96	126	157	187	218	249	279	310	340
6	6	37	66	97	127	158	188	219	250	280	311	341
7	7	38	67	98	128	159	189	220	251	281	312	342
8	8	39	68	99	129	160	190	221	252	282	313	343
9	9	40	69	100	130	161	191	222	253	283	314	344
10	10	41	70	101	131	162	192	223	254	284	315	345
11	11	42	71	102	132	163	193	224	255	285	316	346
12	12	43	72	103	133	164	194	225	256	286	317	347
13	13	44	73	104	134	165	195	226	257	287	318	348
14	14	45	74	105	135	166	196	227	258	288	319	349
15	15	46	75	106	136	167	197	228	259	289	320	350
16	16	47	76	107	137	168	198	229	260	290	321	351
17	17	48	77	108	138	169	199	230	261	291	322	352
18	18	49	78	109	139	170	200	231	262	292	323	353
19	19	50	79	110	140	171	201	232	263	293	324	354
20	20	51	80	111	141	172	202	233	264	294	325	355
21	21	52	81	112	142	173	203	234	265	295	326	356
22	22	53	82	113	143	174	204	235	266	296	327	357
23	23	54	83	114	144	175	205	236	267	297	328	358
24	24	55	84	115	145	176	206	237	268	298	329	359
25	25	56	85	116	146	177	207	238	269	299	330	360
26	26	57	86	117	147	178	208	239	270	300	331	361
27	27	58	87	118	148	179	209	240	271	301	332	362
28	28	59	88	119	149	180	210	241	272	302	333	363
29	29	60	89	120	150	181	211	242	273	303	334	364
30	30		90	121	151	182	212	243	274	304	335	365
31	31		91		152		213	244		305		366

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Which type of batch numbering method will you use?

☐ Counting Off
☐ Julian Calendar
☐ Something Else (describe)

Refer back to your answers from What Do You Need To Track? If a batch log is all that is required for your new batch tracking system, you can skip to Batch Tracking.

For everyone else, let's get started entering stuff into the google sheet!

Step 3: Getting Ready to Track

Open up the google sheet and go to the first tab (Start Here). Add in each product you listed in Step 2, and add the corresponding batch prefix next to it.

Note: the google sheet has space for twenty products. If you have more products than that, email us, tell us how many products you have, and we'll send you a spreadsheet that will work for you.

Grab your product recipes or formulas for reference.

Tab over to Product Worksheet. Go through and add in all of the ingredients and components used in each product.

What is the Difference Between Ingredients and Components?

Ingredients are exactly what you would expect- raw materials that you use to make batches of product. Examples: flour, apples, salt, hops, cocoa butter.

Components are subrecipes. These are things that you make in house, which will end up in multiple batches of product. For example, if you make donuts, you might make a batch of glaze that you'll use to coat many batches of donuts. If you make truffles, you might make a batch of praline that you'll use in many different confections. More examples: spice blends, homemade vanilla extract, candied nuts. Don't worry about the ingredients that go into the components- you'll add those in at the next step.

Note: the google sheet has space for twenty components. If you have more components than that, email us, tell us how many components you have, and we'll send you a spreadsheet that will work for you.
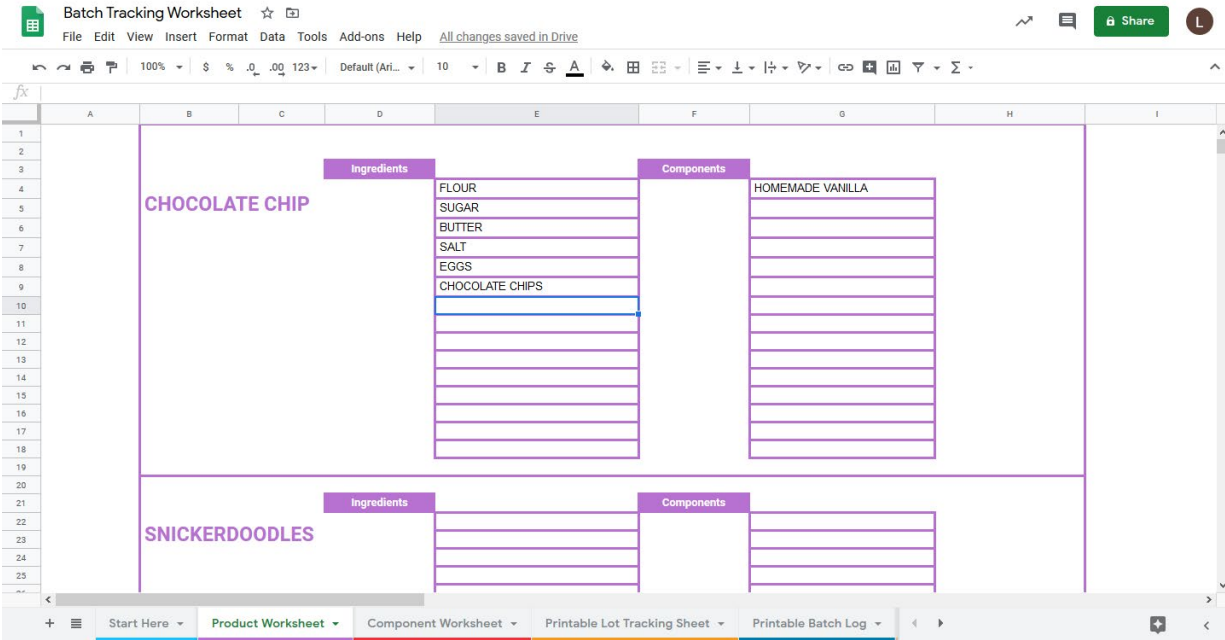
Once you have gone through and added all the ingredients and components of each of your products, tab over to the Component Worksheet.

For each Component you make, add in all ingredients in your recipe/formula, just like you did for products.
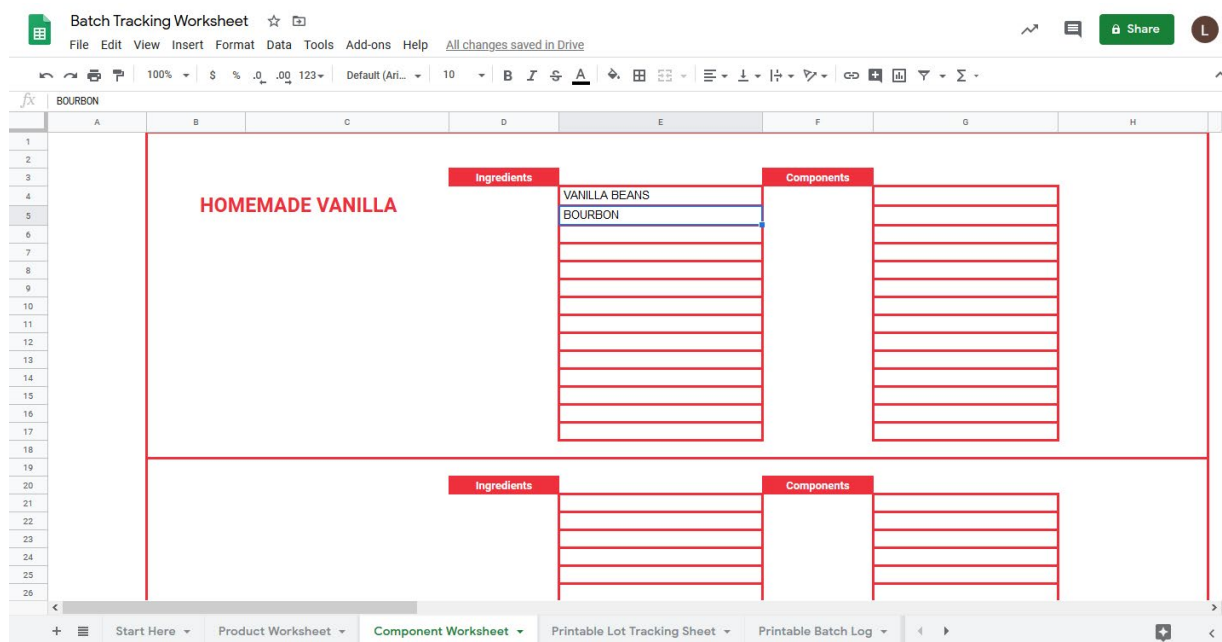
If you have components within components (whoa, meta!), the sheet will add your new component to the next available component section. Scroll down to the bottom and be sure to enter ingredients for those components, too.

If you go back and add new components later, it may shift the component names around, which could make the ingredient/component lists and batch prefixes not match their component names. Remember that this is a spreadsheet! It's smart, but not that smart! Instead of changing the name under 'Component Name' (which will break the connection to the other sheets), just cut and paste the ingredients, etc into the correct component section.

Go back to the Start Here tab and add a batch prefix for each component.

Step 4: Recording Ingredient Lots

On the same page, find your list of ingredients, and add a lot prefix for each ingredient. Just like the batch prefixes you assigned to your products, the lot prefixes help you generate unique lot numbers for each lot you receive. You don't want to repeat lot numbers just in case you have a recall and have to pull everything with that lot number.

Refer back to the section about batch numbers to decide if you want to count off lot numbers or use the Julian Calendar.

For example, if the ingredient you're tracking is cinnamon, the lot prefix could be 'CIN'. If you decide to count off lot numbers, the seventh time you track cinnamon the lot would be #CIN7. If you use the Julian calendar, a lot you receive it on June 9, 2020 it would be lot #CIN2016101)

Recording Lots on Paper

To record lots on paper, print out the ingredient list with the lot prefixes for your reference.

Tab over to Printable Lot Tracking Sheet, print it out, and put it on a clipboard.

Go through all of your inventory and give each lot a number according to your schema, writing each lot number directly on the box or on a piece of blue tape with a sharpie. If you don't know when you received it, take a look at your invoices.

Record all information about each lot on the Lot Tracking Sheet.

Keep the lot tracking sheet somewhere safe. When it is filled up, put it in a file cabinet, in a dedicated binder, or in another safe place.

Recording Lots Electronically

To record lots electronically with Raveler, go to www.raveler.io/batches for a video demo.

Step 5: Your Batch Tracking System

Depending on your operational needs, you may choose to track batches with paper sheets, track batches electronically with Raveler, or just use a simple batch log.

Making a Simple Batch Log

If you don't need to record ingredient lots, batch actions or QA measure-ments, a batch log is probably all you need. Tab over to Printable Batch Log, download it as a pdf, and print it out. Next time you make a batch of product, simply fill out the information in all of the columns, using the batch number-ing scheme that you decided on in Step 2.

Making Batch Tracking Sheets

Tab over to Printable Batch Tracking Sheet. Start with your first product. Change 'Product/Component Name' to the name of the product. In the Batch Number section, replace the word 'PREFIX' with the batch prefix you decided to use earlier, just to make your life easier down the road.

Refer back to your answers from the 'What Do You Need to Track?' section. Are there any batch actions or QA measurements you need to record? If so, just add them into the appropriate cells. For example, if you have to record temperature, change "MEASUREMENT #1" to "Temperature". If any of these are unnecessary for you, simply delete the rows you don't need. If you need to add more, simply insert more rows.
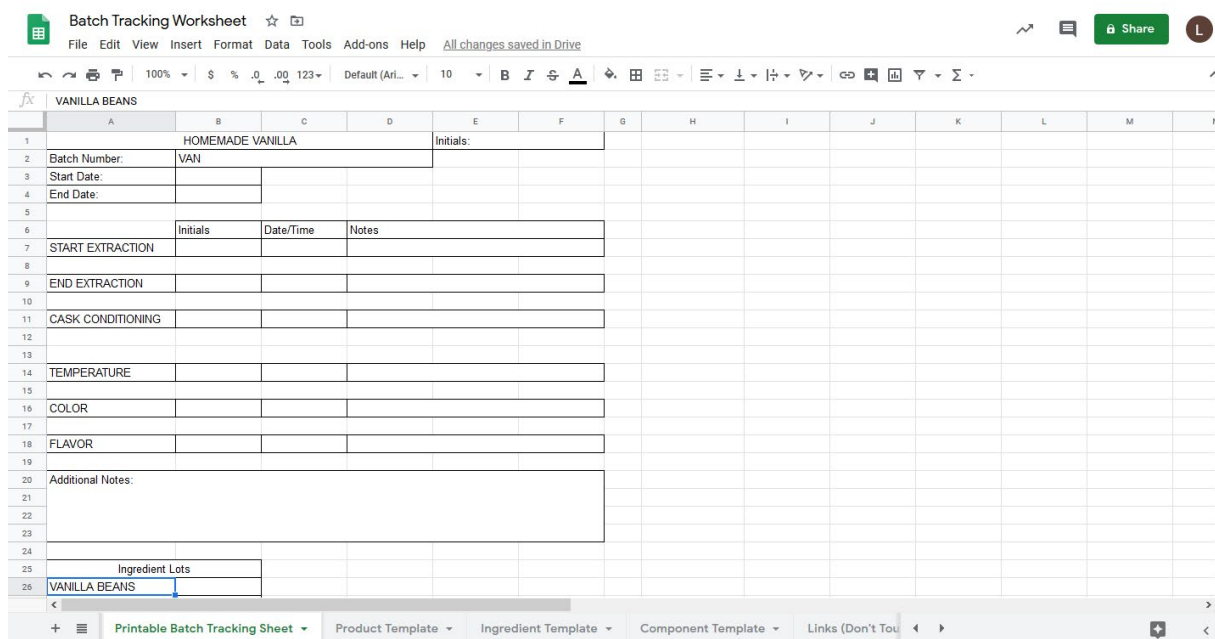
Tab back over to 'Product Worksheet' and select everything in the ingredient list and copy (CTRL+C). Tab back over to the Batch Tracking Sheet, select the cell that says "Ingredient #1" and click paste (CTRL+V). Go back and repeat for any components that are included in this product. Delete any cells you don't need.

Congratulations! You made your first batch tracking sheet!

Right click on the tab and rename it with the name of the product. Download it as a pdf to print it, and make sure everything looks good. Then duplicate that tab and repeat the process until you have one for each of your products and components. Print out a bunch and put them somewhere safe and dry so they're ready for you when you're ready to use them.

Why do I have to track both product batches and component batches?

If you have to track ingredient lots, then you have to track what component batch each of those ingredient lots went into, and track which batch of product each of those component batches went into.

Putting a Paper Batch Tracking System Into Action

When you're ready to make a batch, grab the batch tracking sheet for the product you're going to make, write the batch number (based on the schema you decided to use) and the date at the top.

For each ingredient you use in the batch, write the corresponding lot number in the section provided. If you use more than one lot of a given ingredient in a single batch (for example, you finish one bag of flour and add some from another), just write both lots in. Over the course of the batch, record whatever batch actions and measurements you specified.

Once the batch is finished, write the batch number on a piece of tape and keep it on or near the batch. Be sure to keep the batch tracking sheet in a safe place such as a dedicated binder or file cabinet. Ask your regulatory authority how long you should keep records.

To record batches effortlessly with Raveler, check out a walkthrough video at www.raveler.io/batches

Step 6: Putting Batch Numbers on Finished Products

No matter how you track your batches, batch numbers won't get you very far if they don't make it onto the finished product! To get the batch number onto packaged products easily, you may want to invest in a DYMO printer or something similar. Then enter in and print the batch numbers directly on labels that you can stick to the bottom of the package.

You may also choose to hand write the batch numbers for a handmade look- just make sure it's legible!

Congratulations! You did it!

We know tracking batches can feel overwhelming, but the rewards of muscling through this exercise are massive. If you don't track your batches accurately, you risk getting a warning from the regulatory authority at best. At worst, you risk having a massive recall, losing your business and/or being held personally responsible for damages done. Isn't it worth taking a little time today to put a system in place so you and your business are protected?

Paper systems are a great place to start, but after going through this exercise you may decide that you want to track batches electronically with Raveler instead. Awesome! Your ingredients, components and products are already listed out in an uploadable template- setting up your account will take no time.

To Quick Start with Raveler:
In the google sheet, tab over to 'Ingredient Template' go to File > Download > Comma Separated Values (.csv), and save the file. Do the same for 'Component Template' and 'Product Template'.

Why use Raveler?
- You'll have time stamped records that are always available- you don't have to worry about saving all those sheets of paper.
- Automatically get batch numbers according to your specifications and unique lot numbers for everything you track.
- You can set up functions for QA measurements you take, for example if you wanted to see the average pH readings over the course of the batch.
- Do you use returnable containers like kegs or crates? Our integrated container tracking module means you can track which batch goes into a specific container. Track all the containers you want for no additional cost.
- Annoyed that you seem to always have to count everything twice? Once for lot tracking and once to count inventory? You can do both at once with our integrated inventory module for no additional cost.

Ready to set up your account? Go to www.raveler.io/batches to sign up now!